

OBSERVATIONAL STUDY TO EVALUATE EFFECT OF DIWASWAPNA ON JATARAGNI

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Abstract

Ayurveda opines like proper diet, proper sleep is also essential for the maintenance of the life. In general *Nidra* is *Ratri Swabhava* means a person should sleep minimum 6 -8 hours during night to lead a healthy life. *Nidra* is a very important regimen of day to day life if not followed properly can cause severe diseased condition, which was affect, the physical and mental health. *Diwaswapna* means sleeping during daytime. *Diwaswapna* is contraindicated in the concepts of Ayurveda. Sleeping during daytime in the season other than summer is not advisable as it causes vitiation of *Kapha* and *Pitha*. *Diwaswapna* increases the *Snigdha Guna*, which inturn is a cause for the vitiation of *Kapha* and finally this leads to *Angimandya*. According to Ayurveda *Agnimandya* is considered as a chief cause for all the diseases. Hence this study is an attempt to revalidate the relation between *Jataragni* and *Diwaswapna*.

Key words: *Nidra*; Sleep; *Jatragni*; *Agni*; *Divaswapnam*.

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INTRODUCTION

Agni plays vital role in maintaining the body.^[1] *Agni* or the fire is responsible for strength, health and longevity. It determines the amount or quantity of food to be consumed. The word *Agni bala* is used to denote the nature of *Agni* i.e. whether it is in normal, increased or decreased. The ingested food is digested, absorbed and assimilated by *Agni*. According to the functions and site of action, *agni* has been divided into 13 types, i.e. first and most important one *Jatharagni*, five *Bhutagni* and seven *Dhatuvagni*. *Jatharagni* is the most important one, which digests four types of *aahara* (food) and transforms it into *rasa* and *mala*.^[2] *Jataragni* is the chief among all the categories of *Agni* because its increase and decrease result in the increase and decrease of other *Agni*.^[3] It is located in stomach or *Jatara* and accomplishes body requirements.^[4] *Diwaswapna* means sleeping during daytime. It is contraindicated according to the concepts of Ayurveda. Sleeping during daytime in the season other than summer is not advisable as it causes vitiation of *Kapha* and *Pitta*.^[5] *Diwaswapna* increases the *snigdha* guna,^[6] which inturn is a cause for the vitiation of *Kapha* and finally this leads to *Angimandya*. According to Ayurveda *Agnimandya* is considered as a chief cause for all the diseases. Hence this study is an attempt to revalidate the relation between *Jataragni* and *Diwaswapna*. *Jataragni* was be assessed by the score obtained with the help of specially designed questionnaire method. Therefore an observational study to evaluate effect of *diwaswapna* on *jataragni* was carried out.

AIMS AND OBJECTIVES

To analyze the *Jataragni* of individuals who follows *Diwaswapna*.

MATERIALS AND METHODS

The survey study was carried out to evaluate the effect of *diwaswapna* on *jataragni*. It was conducted in and around of Moodbidri, Karnataka.

Selection of volunteers

- Number of volunteers - 150
- For survey volunteers were taken from in and around of Moodbidri, Karnataka.
- No medicine was given by scholar to volunteers, only survey analysis.

Inclusion criteria

- Healthy volunteers who follows day time sleeping since at least 6 months.
- Age group: 30 – 45 years.
- Gender – either gender.

Exclusion criteria

- Pregnancy and lactating woman.
- Volunteers suffering from systemic illness.
- Those who are under medications.
- Night shift workers.
- As per classic who are eligible for *Diwaswapna*.^[7]
- *Grishma rithucharya*

Assessment criteria

- *Jataragni* was assessed by the score obtained in the questionnaire method.
- Data collected was calculated by using required statistical method.

OBSERVATION

150 volunteers were registered in the study. No volunteers were excluded from the study as it is only a survey study and does not deal with any treatment.

All the volunteers belong to the age group of 30-45 as it is the inclusion criteria of the present study. Majority of the volunteers i.e. 63.33% were females, while 36.67% volunteers were males. The reason may be the present study includes house wives and the other reason is males usually move for some or other work.

Maximum number of volunteers i.e.76% was belonging to Hindu community, while 13.33% were of Muslim community, 10.67% were Christians. Here the survey area may be of mixed community living area. The present study does not have any relevance on religion. The data shows that 91.33% volunteers were married while 3.33% volunteers were unmarried, 3.33% volunteers were widow and 2% of divorce.

The data reveals that no volunteers were uneducated, 6% volunteers were of Primary school education, 48.67% volunteers were higher secondary, 37.33% volunteers were graduates and 8% of volunteers completed post graduate. Maximum 55.33% volunteers were house wives, 19.33% doing Field work, while 22% were Driver and 3.33% were doing desk work. Here the house wives and drivers sleep at improper times.

Maximum number of volunteers i.e. 47.33% belongs to middle class categories, while 34%, 14.67%, 2.67% and 1.33% volunteers belong to lower middle class, upper middle class, rich and poor respectively. The data reveals that all the volunteers are belongs to *sadharana* desha (Normal region). The study shows that all the volunteers were residing in urban areas. 81.33% of volunteers had the habit of mixed food and only 18.67% of volunteers use to take vegetarian food.

The data reveals 92%, 90.67%, 86% and 78.67% of volunteers were taking *Madhura* (sweet), *Amla* (sour), *Lavana* (salty) and *Katu* (pungent) rasa *pradhana dravyas* (main drugs). Only 34.67% and 11.33% of

volunteers were taking *Tikta* (bitter) and *Kashaya rasa* (pungent taste) respectively. The data reveals that 93.33% of the volunteers were taking *Guru and Snigdha guna pradhana dravyas* (slimy food materials). 84% of volunteers are consuming *sheeta* (cold) and *ushna guna pradhana dravyas* (hot property items). Only 34.67% of volunteers are consuming *laghu guna aharas* (easily digestible) and only few volunteers 6.67% were consuming *ruksha guna aharas* (dry food items). The data reveals 61.33% were taking *Vishamasana* (improper diet habits), 34.67% were taking *adhyasana* (more quantity food) and only 4% were taking *Samasana* (normal food habits). Among them 78.67% of volunteers were irregular diet habits and only 21.33% were taking the diet regularly.

Mala

The data reveals only 16% of volunteers had *santushta* (well formed stool) mala and 84% of volunteers had *asuntushta mala* (not formed stool). 96% of volunteers had *sama mala* (with undigested food materials) and only 4% of volunteers had *nirama mala* (normal faeces). Mala of 52% of volunteers are *Katina samhata* (constipated), 12% of volunteers had *drava mala* (watery stools) and 36% had *susamhata mala*. While seeing the *pramana* (quantity), only 12% of volunteers are having *samyaka pramana* (normal quantity) mala, 28% and 60% of volunteers had *alpa* (less) and *bahu mala pramana* (more quantity) respectively. Only 4% of volunteers had *samyaka varna mala* (normal colour) and 96% of volunteers had *vivarna mala* (different colours). 96% of volunteers had *Durgandha* (with foul smell) mala and only 4% of volunteers had *prakrit gandha* (normal smell).

The study shows 52% of volunteers passed motion less than two times a day. 36% of volunteers are passing motion more than two times in a day. 12% of volunteers are passing motion frequently. Table shows 60% of volunteers were found have *krurakoshta*

(constipated). Only 12% of volunteers had *madhyama koshta* and 28% of volunteers had *mridukoshta*.

Mootra

The data reveals 52% of volunteers had *samyaka mootra pravriti* (normal urine output). 24% and 20% of volunteers had *alpa* (less quantity) and *prabhuta mootra pravriti* (more) respectively. Among them 12% of volunteers had *mootrakrucha* (difficult in maturation). 4% of volunteers pass urine with *sadaha* (with burning sensation) and *svedanam* (with pain). 84% of volunteers had *samyaka varna mootra* (normal colour). 4%, 8% and 8% of volunteers had *rakta* (reddish), *pitta* (yellowish) and *sweta varna mootra* (whitish). 72% of volunteers are passing urine more than two times in day and 28% of volunteers are passing urine less than one time in a day. 76% of volunteers are passing urine less than two times in a night and only 24% of volunteers are passing more than two times in night.

Aahara Sakthi

Data shows about 71.33% of volunteers are having *avara ahara shakthi* (less digestive capacity) while 27.78% and 8.67% of volunteers were *madhayama* (medium) and *pravara ahara shakthi* (poor digestive capacity) respectively. Data shows about 74.67% of volunteers are having *avara jarana shakthi* while 25.33% of volunteers had *madhayama jarana shakthi*. Data shows about 66% of volunteers are having *avara vyayama shakthi* (less capable of daily activities) while 34% of volunteers had *madhayama vyayama shakthi*. Data shows that all the volunteers i.e. 100% are in *madhyama vaya* (adults) as the present has included only age group between 30-45 years.

Sleeping during day time

Most of the volunteers i.e. 71.33% had the habit of sleeping 1-2 hours in day time. 28.67% of volunteers use to sleep 3-4 hours in day time. Most of the volunteers i.e. 71.33% had the habit of sleeping 1-2 hours in day time and 28.67% of volunteers use to sleep 3-4 hours in day time only after lunch.

Sleep during night time

The study reveals that the 42% of volunteers are sleeping only 3-4 hours in the night and 34.67% of volunteers had the sleep in the night 5-6 hours and only 23.33% of volunteers had the sleep of more than six hours in night time. If day time sleep is followed usually the night sleep will be less. Here there are a lot of chances for various ailments related to *agni*. The data reveals 76.67% of volunteers are having *asamyak* (abnormal) sleep and only 23.33% of volunteers were having *samayak nidra* (normal sleep). 42%, 23.33% and 42% were having *alpa* (less), *prabhuta* (more) and *khandita* (disturbed) sleep respectively. As the volunteers have the habit of sleeping in day time naturally the sleep will be disturbed or less.

RESULTS

The present is an observational study to evaluate effect of *Diwaswapna* on *Jataragni*. Hence *Jataragni* was assessed by the scoring pattern obtained by a questionnaire method after screening the classics which relates *jataragni*⁸ verses *divaswapnam* with various symptoms related to *agni*. Questionnaire is attached as annexure. The questionnaire includes 41 questions which includes signs to evaluate the condition of *Jataragni at jatara* level and *dhatu* level.

The present observational study reveals the effect of *Divaswapna* on *Jataragni* and the following datas obtained while evaluating the questionnaire on *jataragni* are 74.67% of volunteers had Loss of appetite, 70.00% had aversion towards food, 96.00% volunteers had indigestion with normal amount of food, 84.00% of volunteers had indigestion even when they eat a little, 66.00 of volunteers had heaviness of abdomen even when they eat normal amount of food, 59.33% of volunteers had heaviness of abdomen even when they eat a little, 59.33% of volunteers need long time for digesting routine quantity of food, 41.33% of volunteers need long time for digesting a little food, 60% of volunteers had loose stools occasionally, 52% of volunteers had Constipation occasionally, 52.00% of the volunteers passing hard stools, 36.00% of them had strain while passing stools, 70.00% of them had lots of belching in a day, 82.67% of the volunteers had sense of burning in abdomen, 28.00% had sourness in mouth, 71.33% of the volunteers had Bitterness in the mouth, 72.00% of them had *Maaduryatvam* (sweet taste in the mouth), 68.00% of the volunteers had dryness of throat. 69.33% of the volunteers had dryness of palate, 71.33% of the volunteers are drinking water more frequently, 54.00% of them had yellowish discoloration of eyes, 52.00% of the volunteers had lots of hiccup in a day, 64.00% of the volunteers had difficulty in passing flatus, 52.00% of them had a feel of hunger frequently even when you have consumed good amount of food, 55.33% of the volunteers had get excessive salivation after food and feeling of nausea after food, 20.00% of the volunteers are having the feel of vomiting after food, 12.00% of the volunteers feel hunger at proper time, 67.33% of the volunteers had indigestion when they intake other than routine food, 67.33% of the volunteers are suffering from headache when they intake other than routine food, 70.67% of volunteers had indigestion when they take food at irregular intervals, 96.00% of the volunteer's complexion is reduced and the

complexion is not maintained for any of the volunteers. 28.00% of the volunteer's body weight was reduced, 60.00% of the volunteer's weight was increased, only 24.00% of the volunteer's mind is stable, 52.00% of the volunteers had fluctuations of thought in their mind, 24.00% of the volunteers had difficulty in perceiving sense objects, 24.00% of the them felt they don't have normal intellect, 45.33% of the female volunteers are having disturbance in normal menstrual cycle, Only 22.00% of the male volunteers had proper ejaculation.

DISCUSSION

Discussion on hunger

88% of volunteers are not having hunger in proper time. 12% of volunteers are having the hunger in proper time. The main issue is the functional loss of the *agni*. If *jataragni* is in *samavastha* (normalcy) the function of digestion occurs properly or otherwise it leads to improper digestion. According to Ayurveda the cause (*Hetu*) which impaires *agni* or the digestion process are *aharaja* and *viharaja* (food and activities). Though there are a lot of *aharaja* hetus in the routine life *viharaja* hetus like *divaswapnam* hampers the routine clock set up itself. Gradually *divaswapnam* disturbs the routine day today activities, which inturn disturbs *jataragni*.

Discussion on loss of appetite

Data reveals that 25.33% of volunteers are not having the complaint of loss of appetite. 74.67% of volunteers are having the complaint of loss of appetite, out of that 13.33%, 28% and 33.33% of volunteers are having the mild, moderate and severe loss of appetite respectively. When there a cause for a long time to hamper *agni*, naturally loss of appetite will be a sign. This proves *divaswapnam* is one among the cause to hamper *jataragni*.

Discussion on aversion towards food

When *jataragni* is disturbed the sign aversion towards food is observed. In the study 30% of volunteers are not having the complaint of aversion towards food. 70% of volunteers are having the complaint of aversion towards food, out of that 16%, 32% and 22% of volunteers are having the mild, moderate and severe aversion towards the food respectively. *Divaswapnam* is a *tamasika* type of *vihara* and so definitely causes *amatvam*, which is the base of *annavaha srothudushti*.

Discussion on indigestion

4% of volunteers are not having indigestion with normal amount of food. 96% of volunteers are having indigestion with normal amount of food, out of that 24.67%, 60% and 11.33% of volunteers are having the mild, moderate and severe indigestion with normal amount of food respectively. 16% of volunteers are not having indigestion even when they eat a little. 84% of volunteers are having indigestion even when they eat a little, out of that 19.33%, 47.33% and 17.33% of volunteers are having the mild, moderate and severe indigestion even when they eat a little respectively. The entire range of digestive and metabolic activity of the body takes place with the help of the biological transformation media of the body called *Agni*⁹ which in turn governs all the *bhavas* such as *Ayu*, *Varna*, *Bala*, *Swasthya*, *Upacaya* (corpulence), *Prabha* (lusture), *Oja* etc. *Acharya Charaka* clearly states *divaswapna*¹⁰ as a cause for *agni* derangement. Hence the study also proves *divaswapna* is a *hetu* or cause for *agni* derangement which inturn hampers the *annavahasrotas* and produces signs related to GIT.

Discussion on heaviness of abdomen

When *agni* hampers there will be heaviness of abdomen when they eat normal or a little. In the present study 34% of volunteers are not

having heaviness of abdomen even when they eat normal amount of food. 66% of volunteers are having heaviness of abdomen even when they eat normal amount of food, out of that 15.33%, 44% and 6.67% of volunteers are having the mild, moderate and severe heaviness of abdomen even when they eat normal amount of food respectively. 60.67% of volunteers are not having heaviness of abdomen even when they eat a little. 39.33% of volunteers are having heaviness of abdomen even when they eat a little, out of that 6.67%, 31.33% and 1.33% of volunteers are having the mild, moderate and severe complaint of suffering with heaviness of abdomen even when they eat a little.

Discussion on loose stools

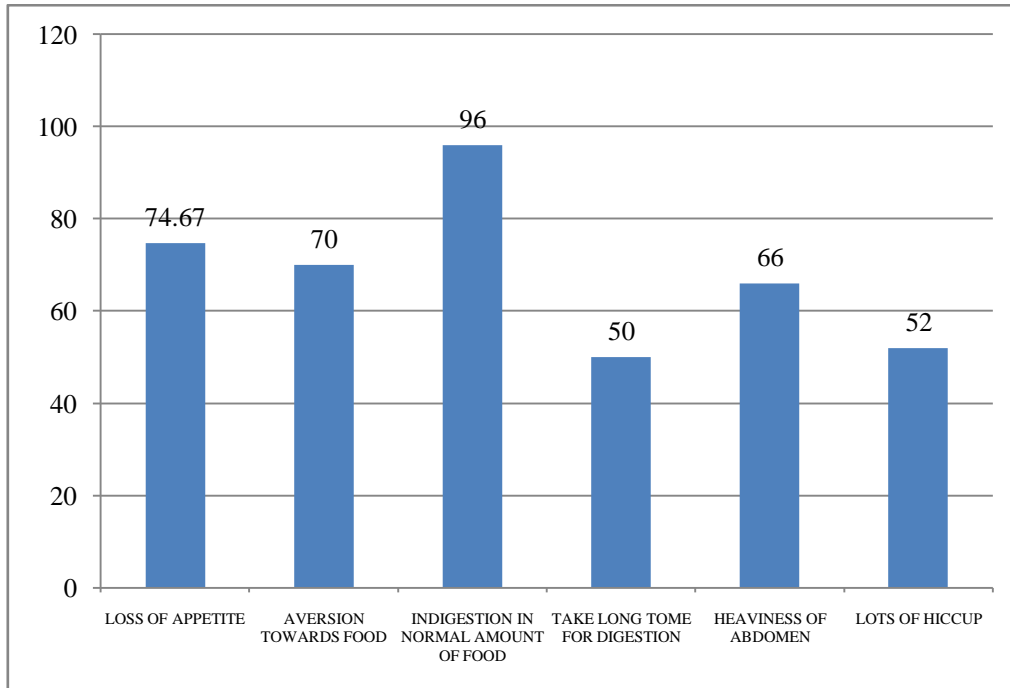
The person who sleeps during day time will have less sleep during night. As sleep is *ratri swabhava*,^[11] less sleep during night gradually leads to *vata dosha* aggravation. Aggravated *vata dosha* leads to constipation. 64% of volunteers are not having the condition of straining while passing stools. 36% of volunteers strain while passing stools, out of that 3.33%, 6.67% and 26% of volunteers are having mild, moderate and severe straining while passing stools respectively. When the stools become hard straining is needed to pass the hard stools.

36% of volunteers are not having difficulty in passing flatus. 64% of volunteers are having the complaint of difficulty in passing flatus, out of that 5.33%, 30% and 28.67% of volunteers are having mild, moderate and severe complaint of difficulty in passing flatus respectively.

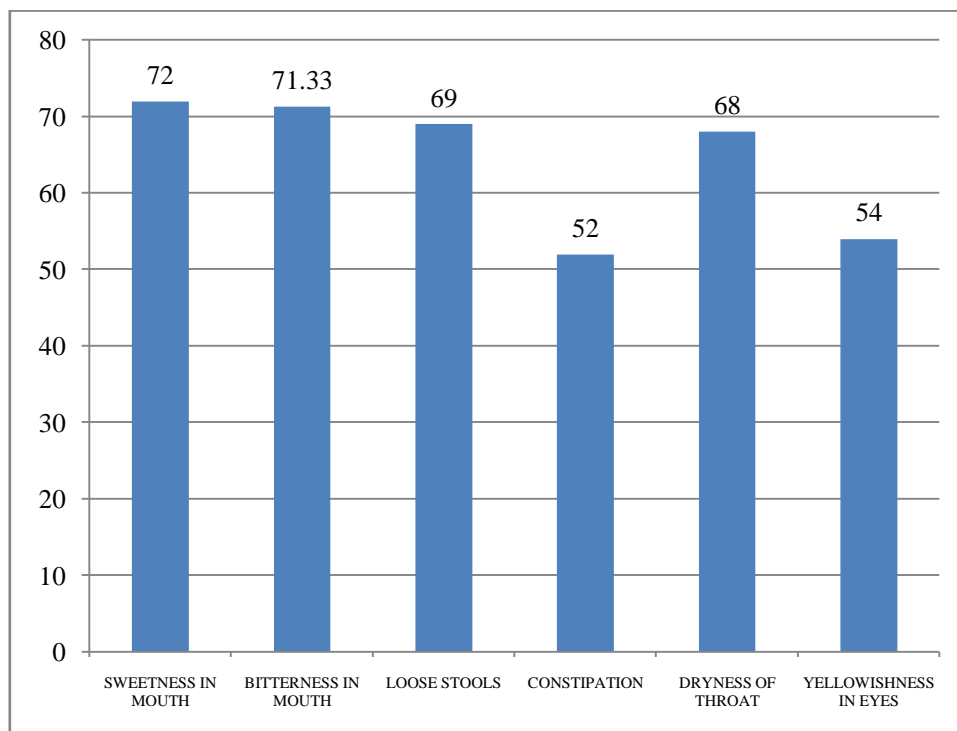
Discussion on certain signs of annavaha srotho dusti

The present survey study reveals there is burning sensation in the abdomen, different tastes in the mouth etc.

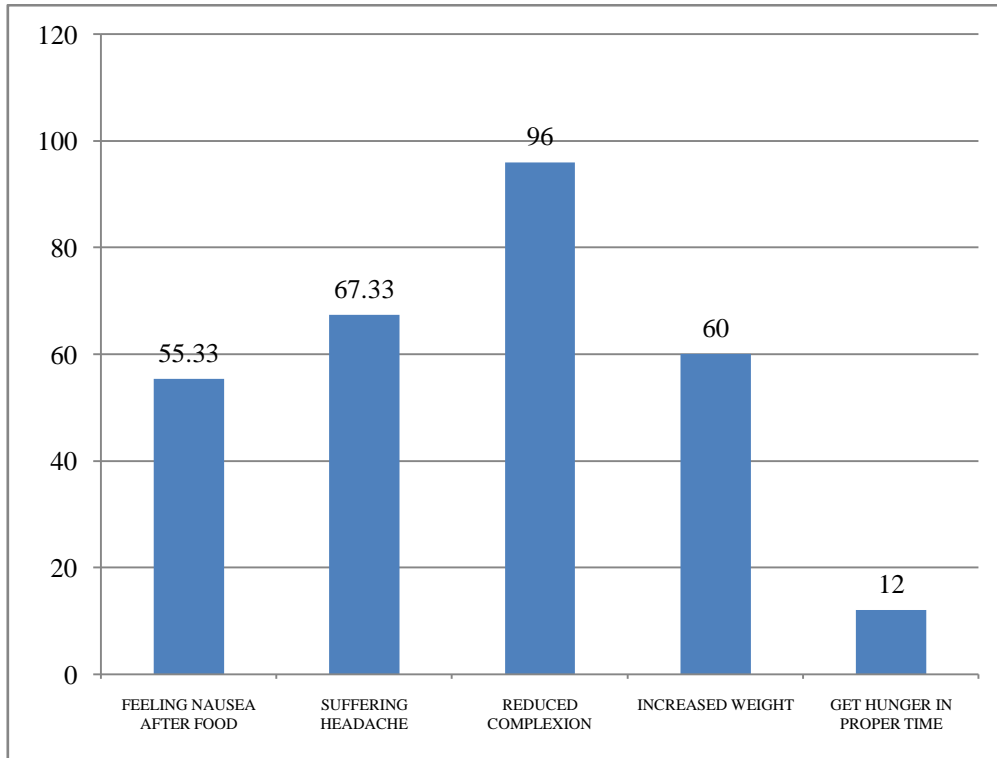
Graph 1: Showing parameters for evaluation of Jataragni



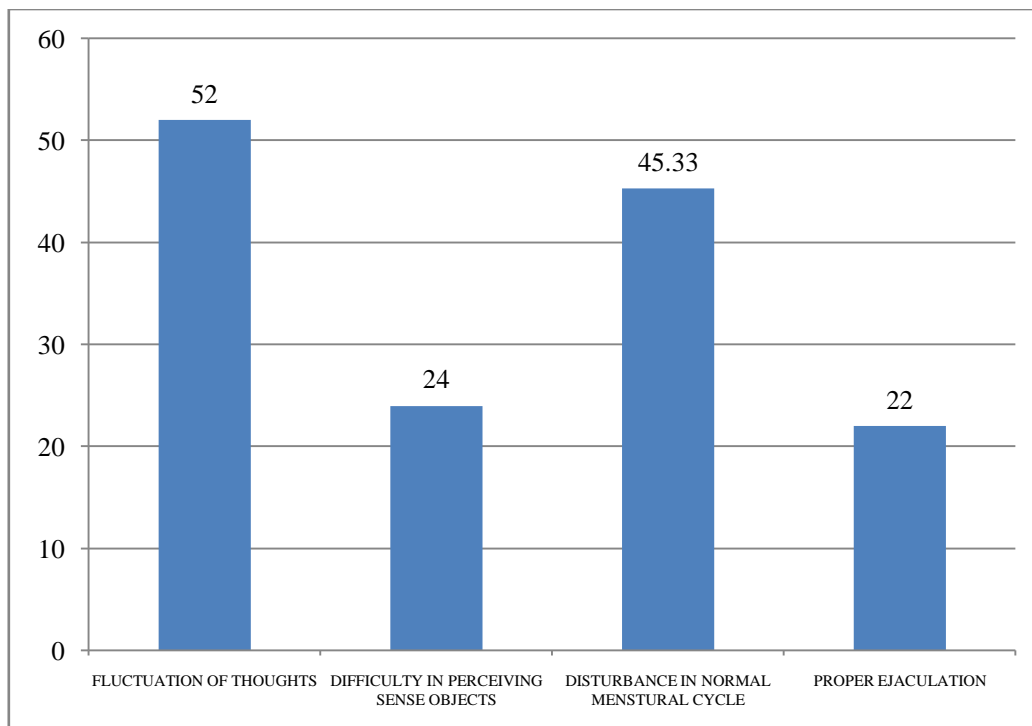
Graph 2: Showing parameters for evaluation of Jataragni



Graph 3: Showing parameters for evaluation of Jataragni



Graph 4: Showing parameters for evaluation of Jataragni



Screening the classics it is the Arochaka,^[12] one among the *annavaha srothodushti lakshana* clearly mentions about loss of taste and the types of *arochaka* (anorexia) namely *vataja*, *pithaja*, *kaphaja*, *sannipataja* and *manasaja*^[13] explains the *lakshanas* (signs and symptoms) - as in *vataja arochaka* there is pain in chest, bitter mouth, tastelessness; in *pithaja* - Burning in chest region, bitter test, excessive thirst, etc; in *kaphaja* - sweetness in mouth, shivering, itching, heaviness; in *sannipataja* - all *tridoshaja* symptoms at a time. In *manasaja* (related to mind) - Loss of desire of food, tastelessness.^[14] The different tastes felt in the mouth reveals that the function of liver is disturbed. Liver is the main organ which aids digestion or completes the main phase of digestion. If *agni* is hampered the digestion will not proper and results in sour or bitter taste of the mouth.

Excessive salivation, nausea, vomiting are particularly because of *kaphadosha* aggravation. *Divaswapnam* leads to *kaphavidhi*.

All the above mentioned symptoms prove that *agni* is hampered due to *divaswapnam*. Here in the present study due to the vitiation of *agni*, *ama* is formed. That is why some are having indigestion, loose stools, and bitterness in the mouth etc. The above study proves that *agni* is hampered not only in *jatara* level but also to the *dhatu* level. Even the mind, intellect and *ojas* is disturbed due to *divaswapnam*.

CONCLUSION

Science of Ayurveda gives much important to the concept of *Agni*. *Agni* is the base to understand the *samprapthi* of diseases (pathology). *Agni* (digestive fire) is situated in the *jatara* and hence named as *jataraagni*. As *nidra* is one among the *Trayo-Upasthambha* (tripod of life), Sleep should be enjoyed at the proper time to maintain the quality of life. Sleep at right time bestows nourishment,

complexion, strength, enthusiasm, keenness of digestive power, wakefulness and maintains normal functions of tissues. Generally *nidra* is *ratriswabava* i.e. sleeping during night is good to maintain the quality of life. Person should avoid sleeping during day and should not keep awake at night. According to Ayurveda day sleep is prohibited or contraindicated and definitely abnormal; it is not good and it aggravates all the *doshas* especially *kaphadosha* which is having more *snigdha* guna. Due to *divaswapna*, *jataraagni* is hampered, which results in production of *ama* at *jatara* level and later to the *dhatu* level. The survey study proves that *agni* is hampered due to *divaswapnam*. That is why some are having indigestion, loose stools, and bitterness in the mouth etc. The above study proves that *agni* is hampered not only in *jatara* level but also to the *dhatu* level. Even the mind, intellect and *ojas* is disturbed due to *divaswapnam*.

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