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A SURVEY STUDY TO EVALUATE THE EFFECT OF DIVASWAPNA IN SANTARPANJANYA VYADHI W.S.R STHAULYA (OBESITY)

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ABSTRACT

According to WHO, prevalence and incidence of obesity says that, is 1.6 billion in adults over the age 15 plus are overweight, at least 400 million adults are obese and at least 20 million children under the age of 5 years are overweight. The scale of the obesity problem has a number of serious consequences for individuals and government health systems. Many researches emphasize that leading sedentary lifestyle is the prime cause of obesity Acharya Charak mentioned that a person with excessive and abnormal growth of Medodhatualong with Mamsa dhatu, have pendulous appearance of buttocks, belly and breast and whose increase bulk is not matched by a corresponding increase in energy is called Sthulapurusha. The etiological factors mentioned in Charaka samhita can be classified under four broad groups, Aharatmak, Viharatmak, Manasa and Anya nidana. Besides these nidanas, now a day it can be seen that high-tech-machineries makes a person less active both in physical and mental level which ultimately leads into sthaulya. Among viharatmak nidana Acharya Charaka, Susustru, Vagbhatta, Bhavprakasha and Madhavakara specially mentioned Divaswapna as a causative factor of Sthaulya. So, to find out its effect as a leading causative factor among the denizens this study was conducted. **Result:** Out of 500 surveyed samples 74% of the samples were having day sleep and among them most of the samples were having sleep in afternoon just after intake of lunch which evidences the diwaswapna as the leading additional causative factor of Obesity.

INTRODUCTION

Santarpanaterm denotes the nourishment, contrast to this is Apatarpana. Santarpana in-corporate those Ahara and Vihara which will add up to the up-liftmen of body tissues, whereas Apatarpana in diminution of accumulated excess tissues. Excess indulgence in Santarpaka Ahara and Vihara makes the individual to get inflicted with the Santarpanyajanya Vyadhi (over-nutrition disorders) eg Sthoulya, Prameha, TwakVikara etc.[1] among all these disorders, Sthoulya is considered as prime risk factors for all other disorders.

According to WHO, prevalence and incidence of obesity says that, is 1.6 billion in adults over the age 15 plus are overweight, at least 400 million adults are obese and at least 20 million children under the age of 5 years are overweight. The scale of the obesity problem has a number of serious consequences for individuals and government health systems. Many researches emphasize that leading sedentary lifestyle is the prime cause of obesity.[2]

Acharya Charakmentioned that a person with excessive and abnormal growth of medodhatu along with Mamsadhatu, have pendulous appearance of buttocks, belly and breast and whose increase bulk is not matched by a corresponding increase in energy is called Sthula purusha.[3] AcharyaCharakaincluded atisthulapurush under the eight verities of impediments, which are designated as ninditapurush in ashtauninditapurushadhyaya.[4]

Even Ayurveda excellence elaborates the numerous etiologies for Santarpanajanya Vyadhi's, viz Kapha Vriddhikar Aahar Sevena, Adhyasana, Avyayama, Divaswapna. The main pathology involved in Sthoulya is Dhatvagnimandya along with increased Kapha Dosa and Medodhata. In the initial stage by consumption of KaphaVriddhikaraAhara, Vihara and Manasika Nidana which deranges Jatharagni causing AmaAnnaras.[5] Among all the Vihatratmak nidana (eg. ayvayam, achinta, sukhshaya, divaswapna etc.) Divaswapnais the leading cause of Sthaulya according to Samanya Vishesh Sidhanta because Sthaulya is Kapha pradhan vyadhi and divaswapna also increases the Kapha dosha so to find out its effect as a leading causative factor among the denizens this study was conducted.

OBJECTIVES

The objectives of the study were to compile and commemorate the classical references of Sthoulya (obesity), to calculate the incidence and prevalence of Sthoulya (obesity) among the

denizens in and around Jaipur city and to analyze the relation-ship among the Divaswapna and Sthoulya (obesity).

MATERIALS AND METHODS

Study Designand Setting

It was single observational study conducted at National Institute of Ayurveda, Jaipur. The data were collected from in and around the Jaipur city, Rajasthan. The study protocol was approved by the Institutional Ethical Committeeof the institute.

Study Participants

Total number of 500 Obese samples were selected using purposive sampling technique and the samples were collected form the outpatient department of the National Institute of Ayurveda, Jaipur and by various door to door survey in and around the Jaipur city after obtaining informed written consent. Patients were screened in accordance with inclusion and exclusion criteria mentioned in the protocol.

Inclusion criteria

Patients of either sex aged between 20 to 60 years; having the classical signs and symptoms of Sthoulya (Obesity) irrespective of gender, religion and occupations belonging to in and around Jaipur city were selected.

Exclusion criteria

Patients with having the family history of obesity, samples having the history of hormonal imbalance, samples having any systematic disorders, samples having obesity with complications and the samples below 20 years and more than 60 years were excluded from this study.

Criteria of assessment

Objective parameters

Clinical parameter

1. BMI
2. Waist/hip ratio
3. Skin fold thickness
4. Biceps circumference
5. Mid-thigh circumference

Laboratory investigations

1. Thyroid profile

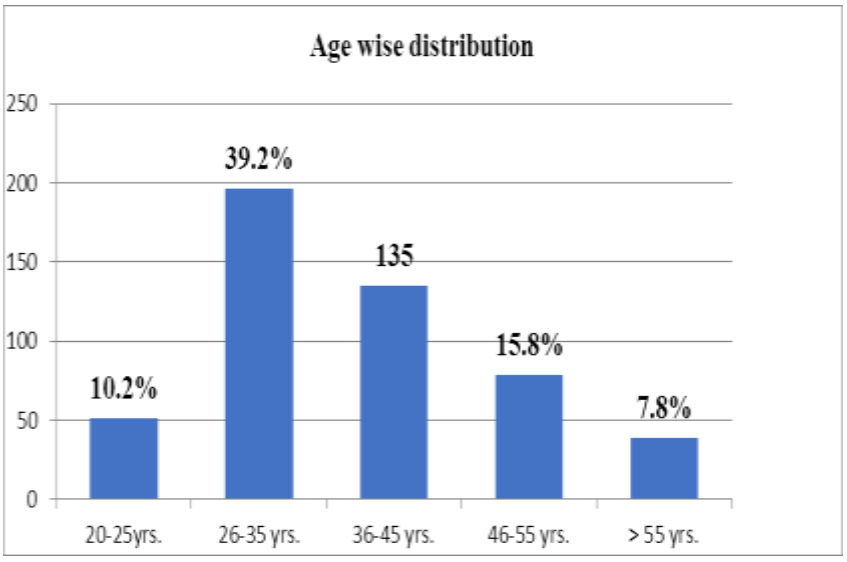
Subjective parameters

Clinical parameter – Self graded scoring

1. Medomasaativradh.
2. Chalasphika.
3. Chalaudara.
4. Chalastana.
5. AtiSweda.
6. AtiDourgandha.

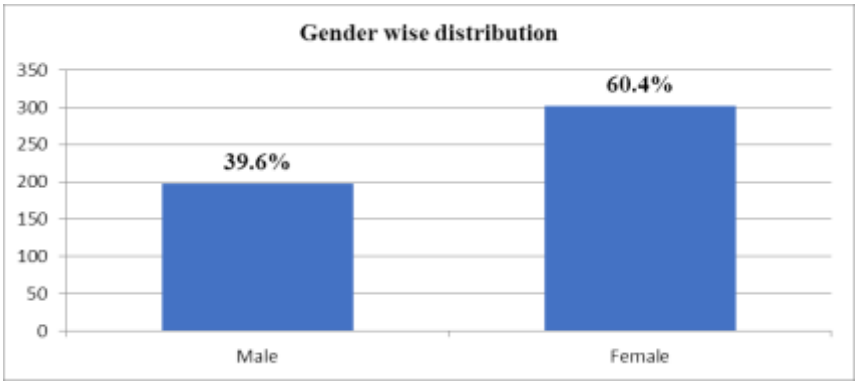
OBSERVATIONS

❖ Graph no 1 shows the incidence of Obesity in different age group. Maximum numbers of samples were between 26-35 yrs. and 36-45 yrs. 39.2% & 27% respectively.



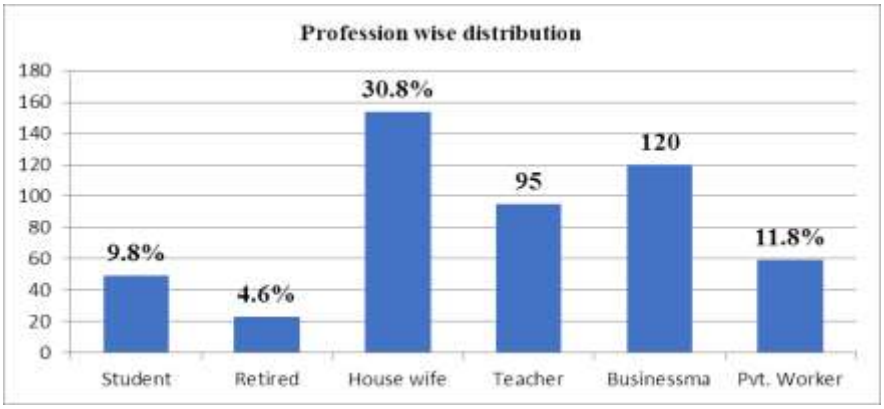
Graph 1: Age wise distribution.

- Graph no 2 shows that maximum percentage of samples 60.4 % were females and 39.6% were males.



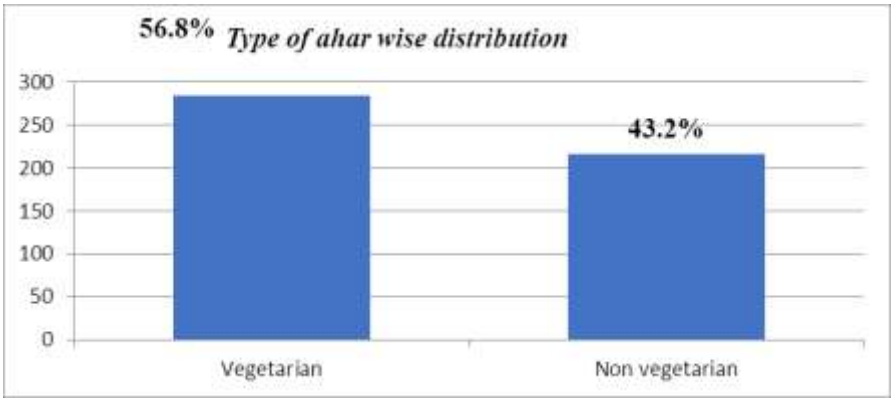
Graph 2: Gender wise distribution.

- Graph no 3 shows that maximum percentage of samples 30.8% were house wife and 24% were businessman.



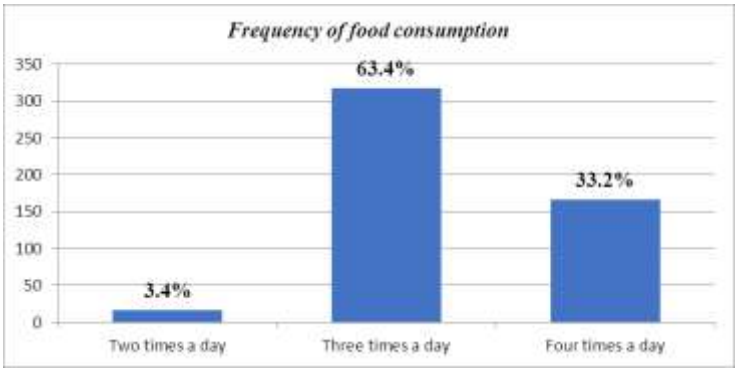
Graph 3: Profession wise distribution.

- Graph no 4 shows that maximum percentage 56.8% of samples were vegetarian while 43.2% of subjects were mixed.



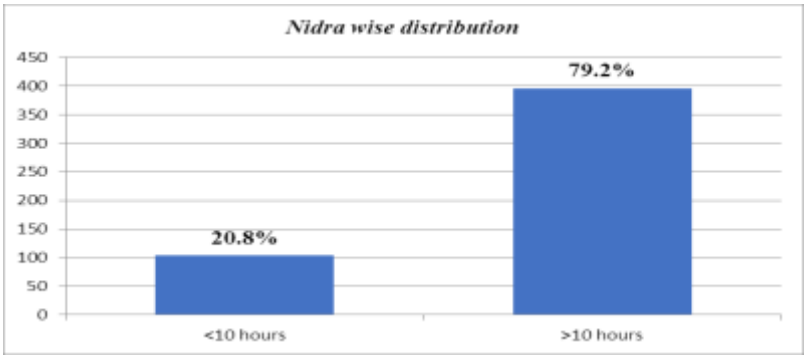
Graph 4: Ahar wise distribution.

- Graph no 5 shows that maximum percentage of samples 63.4% were having food thrice a day and 33.2% were having food four times a day and rest 3.4% were having food twice a day.



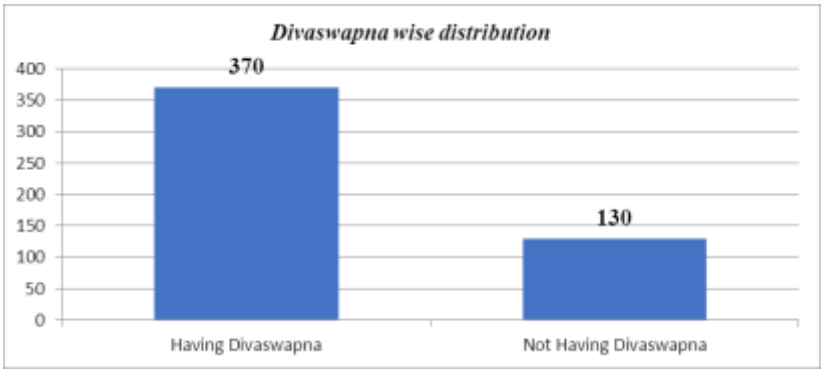
Graph 5: Frequency of food consumption wise distribution.

- Graph no 6 shows that maximum percentage of samples 79.2% were having sleep more than 10 hrs. per day and rest 20.8% were having sleep less than 10 hrs. per day.



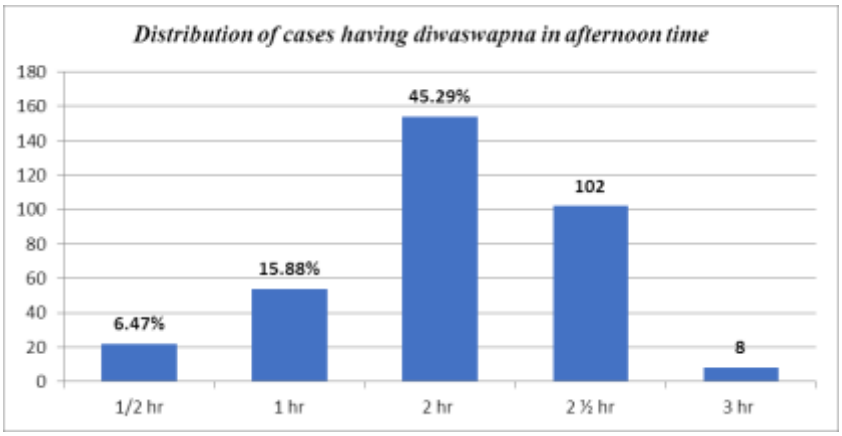
Graph 6: Nidra wise distribution.

- Graph no 7 shows that maximum percentage 74% of samples were taking a nap (diwaswapna) and rest 26% of the samples were not taking a nap.



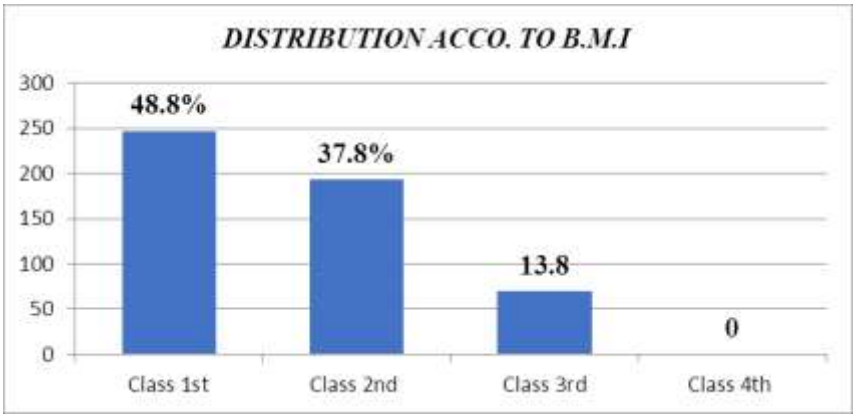
Graph 7: Divaswapna wise distribution.

- Graph no 8 shows that out of 74% of the samples that were having diwaswapna, 91.89% of the samples were having diwaswapna in afternoon time. Among them 45.29% of samples were having diwaswpna 2 hr per day, 30% of the samples were having divaswapna 2 ½ hr per day.



Graph 8: Cases having diwaswapna in afternoon time.

- Graph no 9 shows that maximum percentage of samples 48.8% were coming under B.M.I- (25-29.9), 37.8% of samples were coming under B.M.I (30-34.9), and 13.8% of the samples come under B.M.I. (35-39.9).



Graph 9: Distribution of cases as per B.M.I.

DISCUSSION

Sthaulya is the ailment which often compared with the Obesity a rich men diseases, even Ayurvedaexcellence consider it so. Excess indulging of sedentary activities, intake of madhura, guru, snigdhahara and stress-free life are some of the activities claimed as major etiologies of the disease. Even all of the ayurveda literature says that diwaswapna is one of

the activities which have additional effect to gain the weight irrespective to individual food intake.

The etiological factors mentioned in Charaka samhita can be classified under four broad groups, Aharatmak, Viharatmak, Manasa and Anya nidana.[5] Besides these nidanas, now a day it can be seen that high-tech-machineries makes a person less active both in physical and mental level which ultimately leads into sthaulya. Among viharatmak nidana Acharya Charaka, Susustru, Vagbhatta, Bhavprakasha and Madhavakara specially mentioned Divaswapnaas a causative factor of Sthaulya. In this study, the prevalence of the Sthaulya with respect to the age group falling between the 26-35 yrs. and 36-45 yrs. were 39.2% & 27% respectively. It shows that the middle age groups were the major victim of this ailment. This is happening may be because of the trending life style in present day. Most of the youngsters spending lots of time at night with the modern gadgets which make them asleep overnight. This may lead to adopting of the long-time day sleep. The maximum percentage of samples 60.4% were females and 39.6% were males. In this study, this pattern occurred may be because of strenuous household work which may keep females highly exhausted and making them to take day sleep. And one more reason behind this may be because of usage of technology for hasty completion of the house hold work, intern who may fall sleep in day time because of boredom. Maximum patients i.e. 30.8% were house wives. This may be because house wives are more prone to sitting in front of T.V. in resting hours, doing negligible exercises and this might be work nature, advancement of new techniques, tools (Mixers, washing machines) which minimize energy expenditure and besides these the most important cause is Divaswapna. The maximum percentage of samples 65.2% were married and 34.8% were unmarried. Since the disease affected more to the middle age persons, which is the age when person get married. So, in this study maximum person were recorded as married. Moreover, married subjects revealed that due to professional and family responsibilities they were not able to find much time for any physical activity and were having irregular diet and sleep pattern (night outs). One more reason behind married females are hefty with comparison to unmarried, owing to hormonal imbalance occurring after marriage especially during pregnancy.

Maximum percentage of samples 79.2% were having sleep more than 10 hrs. per day and rest 20.8% were having sleep less than 10 hrs. per day. Maximum percentage 74% of samples were also taking a nap (diwaswapna). According to Ayurveda Divaswapna leads to

incomplete processing of annarasa, it becomes ama, and it is selectively converted to medadhatu owing to the principle of homogeneity (Karma Samanya Siddhanta[6]) by passing the initial two dhatu. Dalhana has attributed this to some 'Vishista Ahara Adrista' or some non-explicable causes. Thus, Medaincreases and accumulates to enormous amounts while as other dhatu suffer from lack of nourishment due to obstruction of their channels and that leads to sthaulya.Rest and the sleep are the activities in which there will be activation of parasympathetic nervous system which intern reduces the Basal metabolic rate. Because of these activities, Divaswapna may leads to accumulation of fat in the body parts which may give rise to obesity like condition. Most of the samples were having Divaswapna in afternoon time so they were more prone to sthaulya in comparison to morning time Divaswapna. In this study,it was also shown that maximum samples were taking Divaswapna in afternoon after having lunch. In this state, restricted physical activity and excessive sleep which intern may increase growth hormone level and diminishes the metabolism which leads to Sthaulya.

CONCLUSION

The duration of sleep, regularity of sleep and especially the day sleep (Divaswapna) is the additional leading etiological factor of obesity.

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