

## Influence of *Deha prakriti* and Causative Factors on *Kaphaja shirah shoola* – A Survey Study

Shiromi H.H.<sup>1</sup>, Sakunthala D.A.R.<sup>2\*</sup>

### Abstract

*Kaphaja shirah shoola* is the most common disease for the time being and major health care issue among the *Shiro roga* that affects considerable number of population. It can be correlated with chronic sinusitis in Modern Medicine and it is the 5<sup>th</sup> most common disease treated with antibiotics in all age groups in both the developing and developed countries in the world without knowing specific causes even today. This study was designed to determine the main causative factors and the influence of *Deha prakriti* on *Kaphaja shirah shoola*. It was conducted from January to December in 2016 at National Ayurveda Teaching Hospital, Colombo, Sri Lanka. Total 60 patients of both genders with age between 18-60 years were randomly selected and data was collected by using questionnaires after obtaining the consent. Data was analyzed by SPSS 21 version. It was revealed that 83% were in the age group of 18-47 years (young adults). 68% were males 47% had family history. (47% *Kapha pitta* & 32% *Kapha vata*) 79% of patients were *Kapha* predominance *Prakriti*. Majority (58%) were normal (healthy) Body Mass Index (BMI) category. As dietary habits, 93% non-vegetarian, 100% & 77% consumption of *Kapha* and *Pitta vriddhikara* food respectively and 53% excessive intake of cold water have been reported. It was reported that 65% less sleep, 45% evening or night bathing, 65% fail to dry hair after bathing, 83% use of chemical cosmetics, 80 % expose to dusty environment and 53% suppression of natural urges as behavioral habits. It can be concluded that

the individuals possess *Kapha* predominance *Prakriti* and association of *Kapha vriddhikara* dietary and behavioral habits are more susceptible to have *Kaphaja shirah shoola* in their lives.

**Keywords:** *Kaphaja shirah shoola*, *Deha prakriti*, Body Mass Index (BMI)

### Introduction

*Shirsha* is known as “*Uttamanga*”, the supreme of all organs in a living being where the *Prana* resides<sup>1</sup>. *Prakriti vata*, *Pitta* and *Kapha* are situated respectively in the lower, middle and upper part of the body. *Shirah* is one of *Trimarma*<sup>2</sup>, *Shadanga*<sup>3</sup> and *Dasapranayathana*<sup>4</sup>. It consists of specific sensory organs such as eyes, nose, ears, and mouth. These sensory organs are known as seven *Dvaras* among the *Navadvaras*<sup>5</sup> in the body. Hence *Shirah* is *Kapha sthana*, due to vitiation of *Kapha dosha* by *Mithya ahara*, *Vihara*, there may be higher probability to have *Kaphaja roga*<sup>6</sup>. *Shirah shoola* (headache) is the term used by the patients to describe the pain and discomforts of the head which is one of the commonest complain of the individuals seeking treatment in Ayurveda as well as modern medicine. The pain is manifested as throbbing, piercing, pulsating, stabbing, dull or aching. All these types of pain in head are introduced as *Shirah shoola*.

In Ayurveda, *Shiro roga* is broad term applicable to the diseases of the head in *Shalakya tantra*. Vitiation of *Vatadi tridosha* individually or in their combination and vitiation of *Rakta* accumulates in

<sup>1</sup>National Ayurvedic Teaching Hospital, Borella, Sri Lanka.

<sup>2</sup> Department of Shalya Shalakya, Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka.

\*Correspondence: Dr. D.A.R. Sakunthala, Department of Shalya Shalakya, Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka. Email:darsakunthala@yahoo.com

*Shirah* that cause pain of the head is called *Shirah shoola*<sup>7,8</sup>. The Ayurveda authentic texts, *Susruta samhita*<sup>9</sup>, *Caraka samhita*<sup>10</sup>, *Ashtanga hridaya Samhita*<sup>11</sup>, *Madawa nidhana*<sup>12</sup>, *Ashtanga samgraha* and *Bhava prakasha* described the headache under the chapter of *Shiroroga* that characterizes mainly *Shirahshoola*. In *Ashtanga hridaya*, the word “*Shirastapa*” has mentioned instead of *Shirah shoola*<sup>13</sup>. Acharya Susruta has described eleven types of *Shiro roga* as *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja*, *Raktaja*, *Kshayaja*, *Krimija*, *Suryavarta*, *Anantavata*, *Ardhavabedaka* and *Sankaka*<sup>14</sup>.

Every individual has a unique identity and possesses unique constitution or body type that is known as *Prakriti* in Ayurveda. It is an inherited characteristic to each individual and mainly divided as *Deha prakriti* and *Manasika prakriti*. These two types of *Prakriti* closely related to the most of the diseases and inherited to each individual at the time of *Shukra artava sammurchana* state in *Garbhashaya*. *Dosik* condition of the uterus, consumption of food and drinks as well as mental state during the pregnancy and the climate condition of the environment at that time are the responsible factors affect to origin *Deha prakriti* and *Manasika prakriti* of an individual in embryonic stage<sup>15, 16, 17</sup>. Inherited *Prakriti* is never change at birth until death. Both types of *Prakriti* is playing major role in preventive and curative aspects of almost all the diseases.

*Kaphaja shirah shoola* is one of *Shiroroga* mentioned in Ayurveda authentic texts that can be correlated with chronic sinusitis which is a common condition in which the cavities around nasal passages (sinuses) become inflamed and swollen, but the maxillary sinuses are the mostly involved one. The prevalence of chronic sinusitis in the United State is 146 per 1000 population statistically<sup>18</sup>. In Sri Lanka prevalence study of *Kaphaja shirah shoola* has not done up to now. The incidence of this disease appears to be increasing yearly without knowing specific causes even today. Chronic sinusitis is the 5<sup>th</sup> most common disease treated with antibiotics in the system of modern medicine. The prevalence of this disease in India is

1 in 8 individuals. Recent estimation suffering from chronic sinusitis in India is 134 million and that is more than population of Japan. Statistically it is mentioned that women appear to be at higher risk than men in other countries<sup>19</sup>. Not only that *Kaphaja shirah shoola* is the most common disease for the time being which can be seen in all age groups in both the developing and developed countries in the world<sup>20</sup>. The symptoms of *Kaphaja shirah shoola* are *Guru* (heaviness and fullness of head), *Himam* (coldness in head), *Shuna akshi kuta vadana* (swelling of face especially around the eyes) and *Shirobhitapah* (dull pain) according to Ayurveda authentic texts<sup>21, 22, 23, 24</sup>. This survey study will reveal important causative factors and influence of *Deha prakriti* on *Shirah shoola*.

### Aims & Objectives

This study was carried out to determine the main causative factors and the influence of *Deha prakriti* on *Kaphaja shirah shoola*.

### Methodology

The present survey has been carried out in *Shalaky* clinic at National Ayurveda teaching Hospital, Borella, Sri Lanka. Data were collected from 60 *Kaphaja shirah shoola* patients randomly, irrespective of their sex with the age range between 18-60 years, by specially prepared two questionnaires with adopting individual discussion method. *Prakriti* has been analyzed according to the Ayurvedic classics by one questionnaire and BMI categories were also assessed based on the ranges given in Wikipedia, the free encyclopedia<sup>25</sup> to rule out any relation with this disease. Ethical approval was taken under the No. ERC/16/57 by Ethics Review Committee of Institute of Indigenous Medicine, University of Colombo, Rajagiriya.

### Statistical Analysis

Collected data of the patients were analyzed by SPSS 21 version.

## Observation and Results

Total 60 patients were registered for the study.

### Distribution of age

Table 1 shows the patients with age wise distribution.

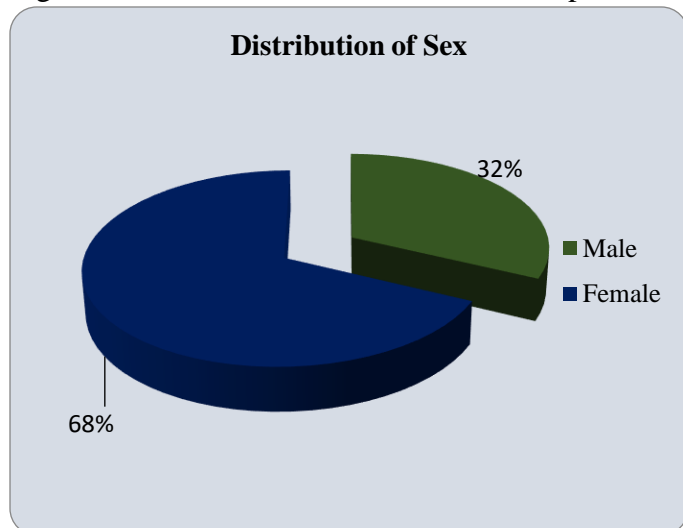
**Table 1: Distribution of age**

Age in years (n=60)	No. of Patients	Percentage (%)
18-27	15	25%
28-37	14	23%
38-47	21	35%
48-57	09	15%
58-67	01	02%
Total	60	100%

83% of patients were 18-47 yrs. (25% + 23% + 35%) and 17% were 48 – 67 years.

### Distribution of sex

Figure 1 shows the sex wise distribution of patients.

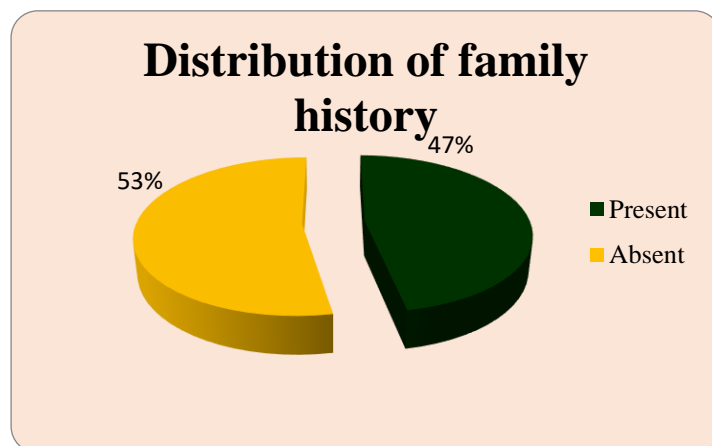


**Fig. 1: Distribution of sex**

In this study 68% of patients were females.

### Distribution of family history

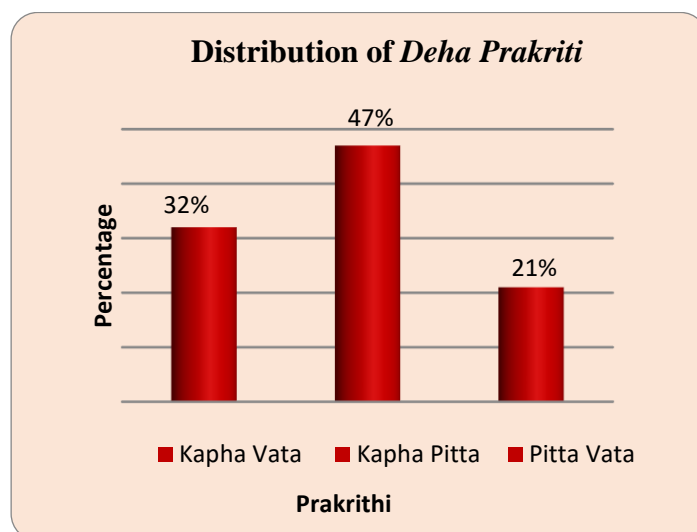
It was found that 47% of patients had family history and rest of the patients (53%) had not family history (Figure 2).



**Fig. 2: Distribution of family history**

### Distribution of Deha prakriti

Figure 3 shows the distribution of *Deha prakrithi*



**Fig. 3: Distribution of Deha prakriti**

It was revealed that 79% (*Kapha pitta* 47% + *Kapha vata* 32%) of the patients were *Kapha* predominance *Deha prakriti*.

### Distribution of Body Mass Index (BMI)

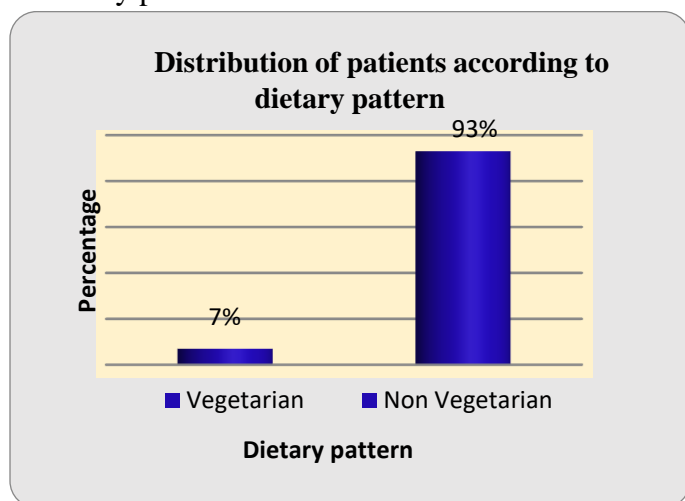
58% of patients were in normal weight of BMI category (Table 2).

**Table 2: Distribution of Body Mass Index (BMI)**

BMI	BMI Category	No. of Patients	Percentage (%)
Below 18.5	Under weight	-	-
18.5 – 24.9	Normal weight	35	58%
25 – 29.9	Over weight	15	25%
30 & above	Obese	10	17%
Total		60	100%

### Dietary habits

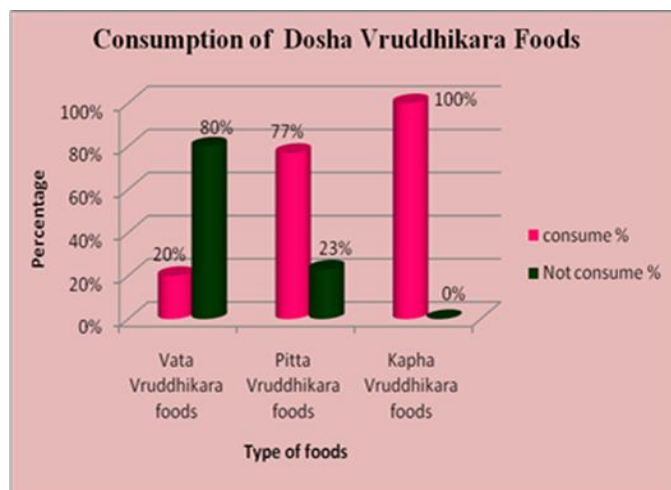
Figure 4 shows the distribution of patients according to dietary pattern.

**Fig. 4: Distribution of Dietary pattern**

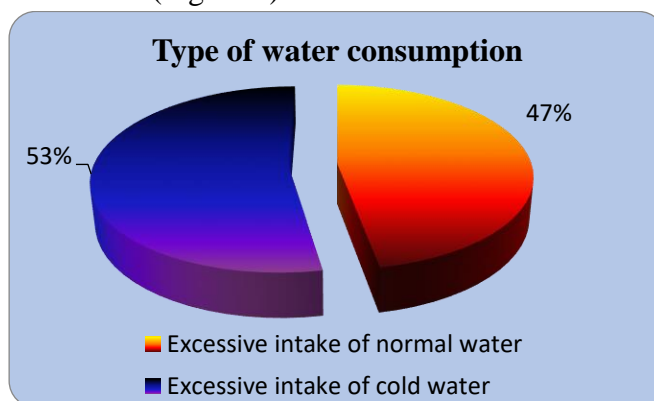
93% of patients were non vegetarians.

### Distribution of the Consumption of *Dosha vruddhikara ahara*

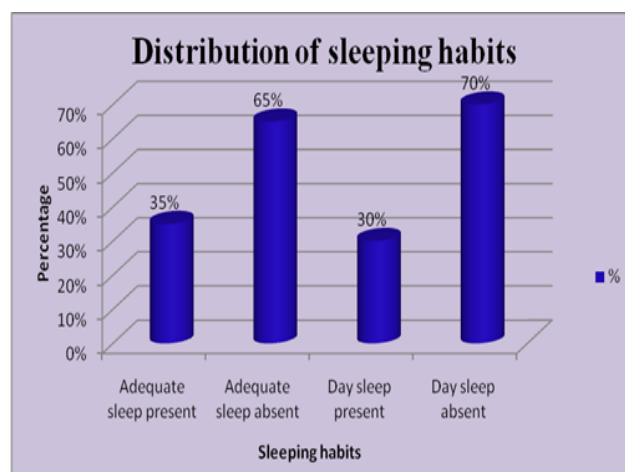
It was revealed that majority of the patients were consumed *Pitta vruddhikara* foods (77%) and all of the patients (100%) were consumed *Kapha vruddhikara* foods (Figure 4).

**Fig. 5: Distribution of the Consumption of *Dosha vruddhikara ahara***

**Distribution of the type of water consumption**  
53% of the patients were excessively consumed cold water (Figure 6).

**Fig. 6: Distribution of the type of water consumption**

### Behavioral habits

**Fig. 7: Distribution of sleeping habits**

It was revealed that 65% of the patients had not adequate sleep and only 30% of patients had day sleep (Figure 7).

#### Distribution of bathing time

Evening or Night bathing was recorded as 45% and 25% was recorded early morning bathing habit (Figure 8).

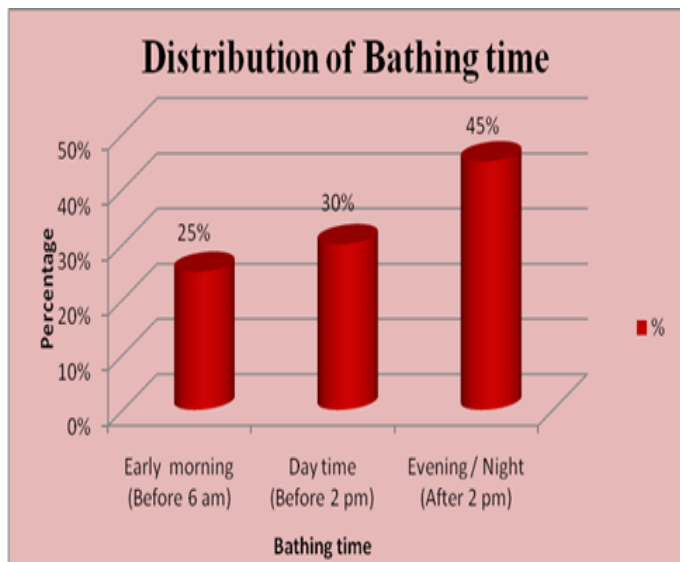


Fig. 8: Distribution of bathing time

#### Distribution of hair drying habit

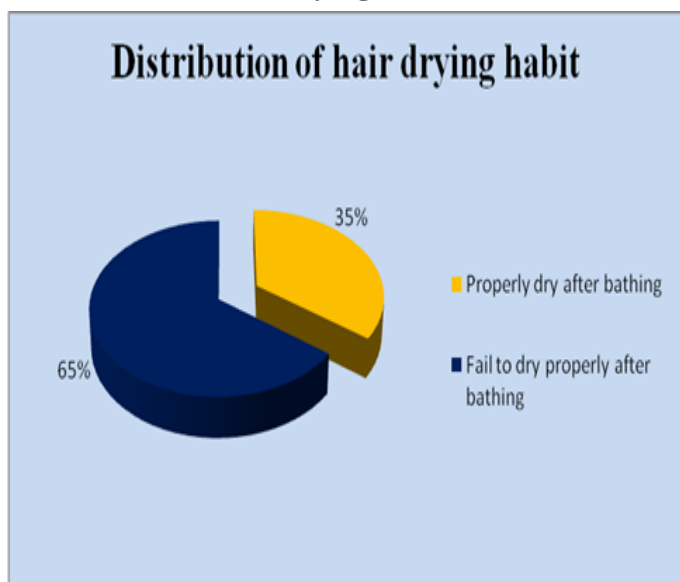


Fig. 9: Distribution of hair drying habit

65% of the patients had not properly dried hair after bathing (Figure 9).

#### Distribution of the use of chemical cosmetics

83% of patients had the habit of using chemical cosmetics (Figure 10).

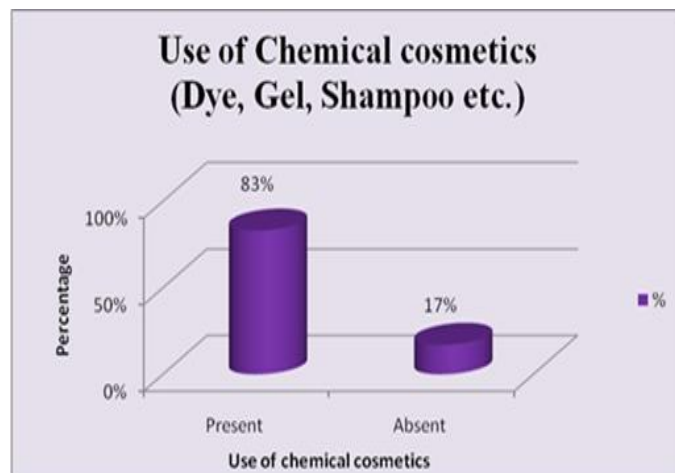


Fig. 10: Distribution of the use of chemical cosmetics

#### Distribution of the patients according to exposure to the nature of environment

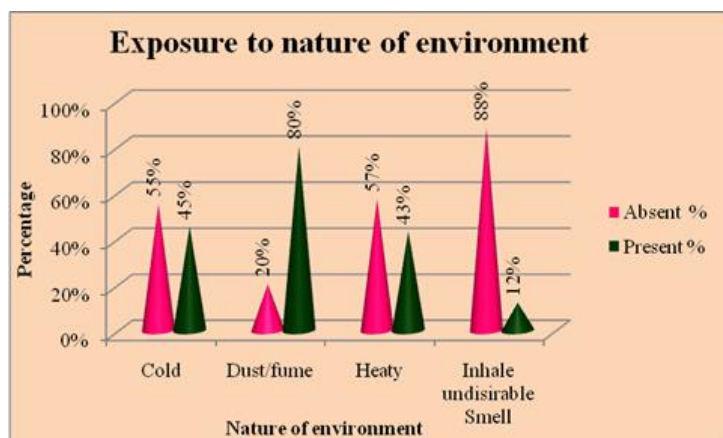


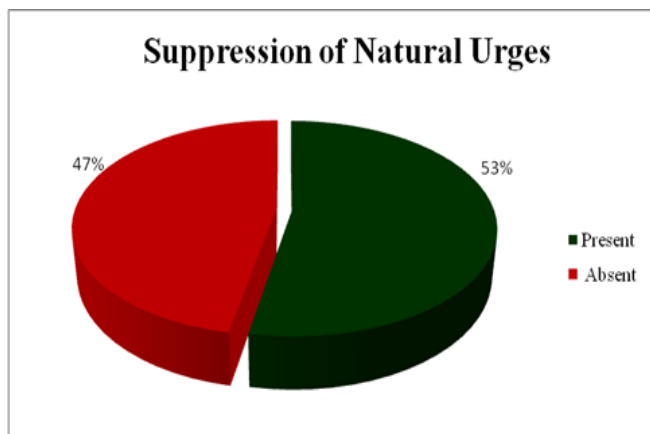
Fig. 11: Distribution of the patients according to exposure to the nature of environment

80%, 45% & 43% of the patients exposed to dust/fume, cold and heaty environment respectively.



### Distribution of suppression of natural urges

53% of the patients were recorded as suppressing of the natural urges (Figure 12).



**Fig. 12: Distribution of suppression of natural urges**

### Discussion

In this study 83% of patients were in 18 – 47 years age range. These age ranges belong to young adults age range. Hence *Kaphaja shirah shoola* is more common in young adults in this study that is same as in other countries in the world.

68% of patients were females in this study. It proves that prevalence of *Kaphaja shirah shoola* is more common among the females in this study and it is also same as in another countries in the world. 79% (*Kapha vata* 32%+ *Kapha pitta* 47%) of patients were possessed *Kapha* predominance *Prakriti*. It shows that *Kaphadosha* is closely related with *Kaphaja shirah shoola* and it is responsible for derangement of *Kapha* in *Shirsha*, the *Kaphasthana* according to Ayurveda anatomy and it increases the prevalence rate hence *Prakriti* and *Doshic* conditions are also similar (*Prakriti* and *Doshasama*) in *Kaphaja shirah shoola*.

In this study it was recorded that 58%, 25% and 17% were healthy weight, overweight and obese category of BMI. Here it shows negative correlation of BMI with *Kaphaja shirah shoola*. Only 47% of patients in this study had family history. It is difficult to conclude that presence of family history is having positive correlation on *Kaphaja shirah shoola* hence sample size is small.

Related to the dietary habits 93% were non vegetarian, 100% consumed *Kapha vruddhikara ahara* and 53% consumed cold water. By these results, it reveals that *Kapha vruddhikara ahara* and cold water aggravated the *Kapha dosha* to fulfil the *Samprapthi* of *Kaphaja shirah shoola*. As causative behavioral habits 65% less adequate sleep, 45% evening or night bathing, 65% fail to dry hair after bathing, 83% usage of chemical cosmetics, 80% & 45% exposure to dust/ fumes & exposure to cold environment, and 53 % suppression of natural urges were recorded. All behavioral habits mentioned above other than suppression of natural urges will cause to increase *Kaphadosha*, the initial cause to *Kaphaja shirah shoola*. Suppression of natural urges will derange *Vyanavata* which is situated all over the body and it is responsible to have pain in *Shirah* related to this disease with other associated factors.

### Conclusion

*Kaphaja shirah shoola* is most common in young adults in this study and it prevails most commonly among females. The individuals having *Prakritis*, predominance of *Kaphaja* characters are more liable to have *Kaphaja shirah shoola*. It was found that BMI is having negative correlation with *Kaphaja shirah shoola* in this study, but it is necessary to carry out studies by increasing the number of patients to come to a final conclusion regarding the influence of BMI on *Kaphaja shirah shoola*. The dietary habits such as *Kapha vruddhikara ahara* and consumption of cold water and behavioral habits such as less adequate sleep, evening or night bathing, fail to dry their hair after bathing, usage of chemical cosmetics and exposure to dust/fume or cold environment by the individuals who are inherited *Kapha* predominant *prakriti*, will increase the prevalence rate of this disease. Hence considerable amount of having *Kaphaja shirah shoola* can be controlled by improving careful correct dietary patterns and behavioral patterns of the individuals.

## References

1. Sharma R K, Bhagwan Dash, (1992), Caraka Samhita, Vol 1, Chowkhamba Sanskrit series, 3<sup>rd</sup> Edition, Varanasi, India, p. 312.
2. Sharma R K, Bhagwan Dash. (2013), Caraka Samhita, Vol VI Chowkhamba Krishnadas Academy, Varanasi, India, p. 326.
3. Ibid, (1994), Caraka Samhita, Vol II, 3<sup>rd</sup> Edition, India, p. 452.
4. Ibid, (1994), Caraka Samhita, Vol II, 3<sup>rd</sup> Edition, India, p. 454.
5. Ibid, (1994), Caraka Samhita, Vol II, 3<sup>rd</sup> Edition, India, p. 456.
6. Ibid, (1992), Caraka Samhita, Vol I, 3<sup>rd</sup> Edition, India, p. 314.
7. Ibid, (1992), Caraka samhita, 3<sup>rd</sup> Edition, Vol I, India, p. 311-312.
8. Ibid, (1992), Caraka Samhita, Vol I, 3<sup>rd</sup> Edition, India, p. 313.
9. Singhal G D & Colleagues, (2007), Susruta Samhita, Vol III, Chowkhamba Sanskrit Pratishthan, Delhi, 2<sup>nd</sup> edition, India, p. 152.
10. Ibid, (1992), Caraka Samhita, Vol I, 3<sup>rd</sup> edition, India, p. 314
11. Srikantha Murthy K.R, (2012), Ashanga Hrdayam, Vol III, Chaukambha Krishnadas Academy, Varanasi, 6<sup>th</sup> edition, India, p. 218, 219
12. Kumarasinghe A, (1987), Madhava Nidana text with Sinhala translation, Department of Ayurveda, Colombo, Sri Lanka, p. 454.
13. Ibid, (2012), Ashanga Hrdayam Vol III, 6<sup>th</sup> edition, India, p. 218, 219.
14. Ibid, (2007), Susruta Samhita, Vol III, 2<sup>nd</sup> edition, India, p. 152.
15. Ibid, (1994), Caraka Samhita, Vol II, 3<sup>rd</sup> edition, India, Vimanasthana, p. 262 – 267.
16. Ibid, (2007), Susruta Samhita Vol II, 2<sup>nd</sup> edition, India, Sarirasthana, p. 46 – 53.
17. Ibid, (2013), Ashanga Hrdayam, Vol I, 9<sup>th</sup> edition, India, p. 413 – 417.
18. Azam R (2014), Modern & Unani concept of headache, International Journal of Pharmacology & Pharmaceutical sciences, 2(4,6 -10)
19. Achim B., Epidemiology of Chronic rhinosinusitis, selected risk factors, comorbidities and economic burden, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4702060/2015;14: Doc 11 published online 22nd Dec. 2015>
20. Ibid, comorbidities and economic burden, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4702060/2015;14: Doc 11 published online 22nd Dec. 2015>
21. Ibid, (2012), Ashanga Hrdayam, Vol III, 6<sup>th</sup> edition, India, p. 218, 219.
22. Ibid, (2007), Susruta Samhita, Vol III, 2<sup>nd</sup> edition, India, p. 152.
23. Ibid, (1992), Caraka Samhita, Vol I, 3<sup>rd</sup> edition, India, p. 314.
24. Ibid, (1987), Madhava Nidana text with Sinhala translation, p. 454
25. [En.wikipedia.org/wiki/ Body Mass Index](http://en.wikipedia.org/wiki/Body_Mass_Index)
26. Lwanga S. K. and Lemeshow S. (1991), Sample Size Determination in Health Studies A Practical Manual. WHO, Geneva, 15.