



## STUDY OF ANATOMICAL VARIATIONS OF JIVHA IN DIFFERENT PRAKRITIES

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### ABSTRACT

Ayurveda, has a holistic approach and includes all the factors which are absolute or accessory in the determination of health. “Prakriti” is one of the most important concept and it is decided at the time of conception. Prakriti indicates, toward physical or Dosha constitution. Involvement of Dosha in Prakriti formation may be individual or intermingled. The individuals of specific Prakriti exhibit biological variations in terms of structure. As the Prakriti differs from person to person, there may be some variation in constitution of their body i.e minute differences in body parts. As there are variations in body part with respect to Prakriti, there may be minute variations in Jivha

(Tongue) structure also. Tongue analysis is an ancient health assessment technique, that is still used in Chinese medicine and Ayurvedic practitioners. In Ayurveda utmost importance is given to, Jivha Parikshan. Jivha Parikshan is the examination tool to determine a person’s mental, physical and emotional state of health. A detailed study and analysis of the concept of the Jivha, its Rachanatmak and Kriyatmak aspect is of utmost importance as Jivha is one of the important sense organ. Various Ayurvedic Samhitas have been referred for a detailed literature review of this concept. Its Utpatti, its Panchabhautikatwa, all have been encompassed in the article. In order to understand any Tongue abnormality or Tongue disease (Jivharoga) a detailed study of the structure and function of Jivha is necessary. The conceptual aspect of Jivha needs to be understood because Jivha is the mirror image of the digestive system. Also the concept of Prakriti-Jivha relation needs to be understood as Prakriti exhibit biological variations in terms of structure.

**KEYWORDS:** Jivha, Jivharoga, Jivha Parikshan, Tongue, Prakriti.

## INTRODUCTION

Ayurveda, has a holistic approach and includes all the factors which are absolute or accessory in the determination of health. “Prakriti” is one of the most important concept and it is decided at the time of conception. Prakriti indicates, toward physical or Dosha constitution. Involvement of Dosha in Prakriti formation may be individual or intermingled. The individuals of specific Prakriti exhibit biological variations in terms of structure. As the Prakriti differs from person to person, there may be some variation in constitution of their body i.e minute differences in body parts. Tongue analysis is an ancient health assessment technique, that is still used in Chinese medicine and Ayurvedic practitioners. In Ayurveda utmost importance is given to, Jivha Parikshan. Jivha Parikshan is the examination tool to determine a persons mental, physical and emotional state of health. There is a description about features of Tongue with respect to Vata and Pitta Prakriti in Samhitas. The description about Kapha Prakriti is not available. Hence there is a curiosity regarding the anatomical variations of Tongue in Different Prakrities. So, that one can diagnose the disease merely by inspecting the tongue with Dosha involved in the body constitution. And one can advice treatment according to Prakriti. Tongue performs important role in producing voice (Vaani or Vaachya). So, according to the Dosha dominance involved in body constitution, Vaani differs from person to person. Main concept of Ayurveda is “Prakriti” before “Vikriti”, so in order to study Vikriti, it is necessary to study Prakrut Sharir first. So the current article is encompassed on to study of anatomical or structural variations of tongue in Different Prakrities.

## AIM

To study the anatomical variations of Jivha in Different Prakrities.

## OBJECTIVES

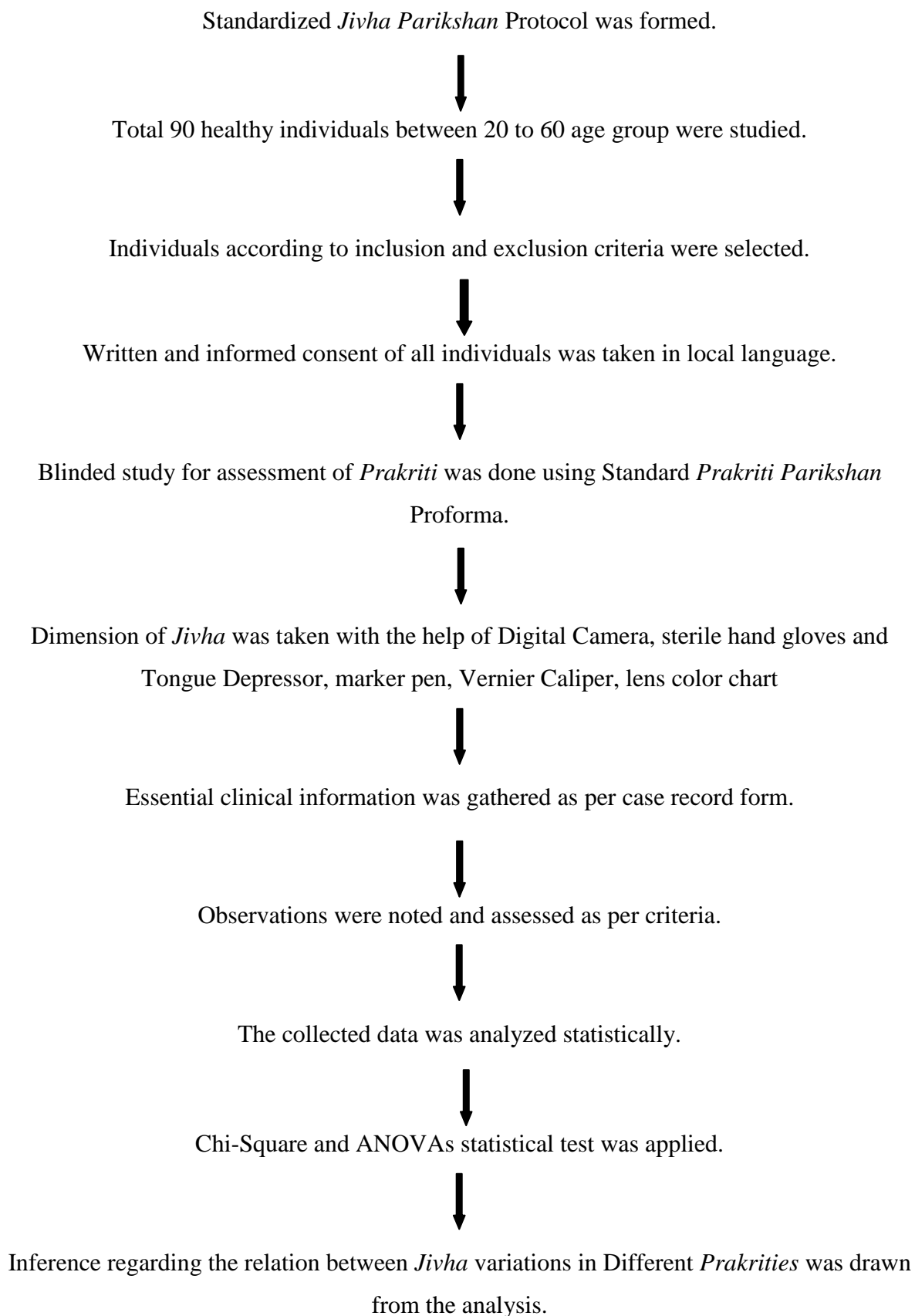
1. To assess the *Prakriti* of an individual.
2. To study the Anatomy of Tongue in detail.
3. To study the *Jivha Sharir* in detail.

## MATERIAL AND METHOD

The Literary material related to Jivha has been collected from different Sthans (parts) of Sushruta Samhita, Charak Samhita, Sarth Vagbhata, Ayurvedic Tongue diagnosis- Kacera W.S. and Modern Anatomy books like BD Chaurasia General Anatomy, Gray’s Anatomy etc. critically reviewed. Ayurvedic and Modern tongue assessment criteria was taken for

assessment of Jivha.

## FLOW CHART



## CONCEPTUAL REVIEW

### Ayurvedic review

*Jivha* is the one of the important *Indriya* among the all *Pancha Dnyanendriya* explained by *Ayurveda*. Without tongue no one can find out taste of sense and no one can talk without tongue. So it is an important organ of body for enjoying the taste of food and for daily conversation with each one in routine life. Hence, it is necessary to know the anatomy of *Jivha* with respect to the *Prakriti* (body constitution). So that one can diagnose the disease merely by inspecting the tongue with *Dosha* involved in the *Prakriti* (body constitution) and one can advice treatment according to the *Prakriti*.

The term *Jivha Parikshan* includes two terms ‘*Jivha*’ meaning ‘Tongue’ and ‘*Parikshan*’ meaning ‘examination’. Acharya Yogaratnakara explained *Jivha parikshan* under *Ashthavidha Rogi Parikshan*. Acharya Charaka explained *Jivha* of *Dirghayu Balak Lakshanas* in *Charak Sharir Sthan Adhyay*<sup>[8]</sup>

*Prakriti* explained in both *Brihatrayee* and *Laghutryee* except *Madhav Nidan*. Also explained in *Kashyapa Samhita*, *Sharangdhara Samhita*, *Bhel Samhita*, *Haarit Samhita*, *Arundatta* and *Nagarjuna*. Acharya Charaka explained *Prakriti* in *Vimana Sthan 8* and *Indriya 1 Adhyaya*. Acharya Sushruta in *Sharir 4 Adhyaya*. Acharya Vagbhata in *Asthang Sangraha 8* and *Asthang Hridaya 3 Adhyaya*. Acharya Bhavamishra of *Bhavaprakasha* explained about *prakriti* in *Purvakhanda Adhyaya 3* and *Mishrakadhyaya*.

*Jivha* (Tongue) is a *Rasanendriyaadhishtana* which functions as *Rasbodhana* (sensation of test), *Vakpravrutti* (Speech), *Aharagrahana* (Ingestion of food). *Jivha* is a site of *Bodhaka Kapha* and *Pranavayu*. *Jivha* is made up of essence of *Kapha*, *Rakta* and *Mamsa*. It is made up of *Aap Mahabhuta*. *Jivha* is one of the *Saptanga* explained during defining the *Mukha*. It is also one of the *Dnyanendriya*. During *Garbhotpatti* all *Dnyanendriyas* were developed during third week of intra uterine life; so *Jivha* was also developed during third month of intra uterine life according to *Ayurveda*. Out of 36 *Siras* on *Jivha* four are *Avedhya Siras*. Out of seven *Sivanis* explained one was present at *Jivha*. *Jivha* has importance in *Rogi Parikshan* because it is one out of *Ashta Sthana Rogiparikshana*.

Acharya Charaka, has mentioned *Jivha Sampat Lakshanas* of “*Dirghayubalak*” in *Jatisutriya Adhyaya* in *Sharirsthana* of *Charak Samhita*. In *Ayurveda Jivha* (Tongue) *Parikshana* (Examination) was based on *Dosha* imbalance that is as *Doshas* are increase there are

changes in Jivha like in Vata Dosha imbalance Jivha was Shita (cold), Khara (rough), Sphutita (cracked), in Pitta Dosha imbalance Jivha was Raktabha (redish) and Krishna (blackish), while in Kapha Dosha imbalance it is Shwetabha (whitish), Picchila (stiky). In Sannipata condition it becomes Krishna (blackish), Kantaka (thorny) and Ruksha (dry) in nature. In case of Dwandwaja Dosha mixed symptoms and signs appear. Apart from Dosha imbalance Ayurveda also explained characteristics of Jivha in Dirghayu Balaka, also a patient who will die in some time (as Arishta Lakshana) and a patient who will have remaining life.

### **Modern Review**

Detail modern literature of tongue was studied on the basis of Anatomy, Applied anatomy, Clinical Anatomy, Physiology, Histology, Embryology and Tongue Examination.

### **OBSERVATIONS AND RESULTS**

Study was conducted on 20 to 60 age group of 90 healthy individuals of Doshapradhanya (Dominant) Prakriti. For making proportion 30 Individuals of each Doshapradhan (Dominant) Prakriti was assessed for this study.i.e Vatapradhan, Pittapradhan, Kaphapradhan Prakriti.

Out of 90 individuals 83(92.2%) individuals were having centrally aligned tongue while 4(4.4%) individuals and 3(3.3%) individuals were having Right and left aligned tongue respectively.

Out of 90 individuals 64(71.1%) individuals were having pink coloured tongue while 22(24.4%) individuals and 4(4.4%) individuals were having Red and pale coloured tongue respectively.

Out of 90 individuals 45(50%) individuals were having dented edge tongue while 40(44.4%) individuals and 5(5.6%) individuals were having same as tongue body and eroded tongue respectively.

Out of 90 individuals 67(74.4%) individuals were having no mark/cracks on their tongue while 8(8.8%) individuals, 13(14.4%) individuals and 2(2.2%) individuals were having cracks, cuts and lines on their tongue respectively.

Out of 90 individuals 29(32.2%) individuals, 17(18.9%) individuals, 16(17.8%) individuals, 15(16.7%) individuals and 13(14.4%) individuals were having long narrower, oval triangular,

wider, long wider and short wider shape tongue respectively.

Out of 90 individuals 85(94.4%) individuals were having tongue texture with visible buds while 5(5.6%) individuals were having uneven tongue texture.

Out of 90 individuals 4(4.4%) individuals were having bulging tongue surface while 1(1.1%) individuals shows deep tongue surface and 85(94.4%) individuals shows even tongue surface.

Out of 90 individuals 64(71.1%) individuals were shows thin coating on their tongue while 18(20%) individuals and 8(8.9%) individuals shows white and yellow coating on their tongue respectively.

Out of 90 individuals 42(46.7%) individuals were having tongue with shaky movements while 48(53.3%) individuals were having tongue with no movements (still).

Out of 90 individuals all were having Shlakshna tongue. Out of 90 individuals all were having Tanvi tongue.

Out of 90 individuals 64(71.1%) individuals were having Prakritivarnayukta (pink coloured) tongue while 22(24.4%) individuals and 4(4.4%) individuals were having Red and Pale coloured tongue respectively.

Out of 90 individuals Ayama (Length) is more in Vata Prakriti individuals as compared to Pitta Prakriti and Kapha Prakriti individuals.

Out of 90 individuals Visthara (Breadth) is more in Kapha Prakriti individuals as compared to Vata Prakriti and Pitta Prakriti individuals.

Out of total 14 Jivha assessment criteria, there is significant association between Doshapradhan Prakriti and Jivha variations observed in Alignment, Colour, Edge, Marks/Cracks, Shape, Texture, Surface, Coat, Movement, Prakritivarnayukta, Ayama (Length), Visthara (Breadth) criteria's. And there is no significant association between Doshapradhan Prakriti and Jivha variations observed in Shlakshna and Tanvi criteria's.

## DISCUSSION

In this study work out of 90 healthy individuals, 30 individuals were of *Vatapradhan Prakriti*, 30 of *Pittapradhan Prakriti*, 30 of *Kaphapradhan Prakriti* were studied.

Study was conducted on 90 healthy individuals of *Doshapradhan Prakriti* to develop Standard assessment parameter for *Jivha Parikshan* according to *Rachana sharir* in *Doshapradhan (Dominant) Prakriti*. For this study case record form was developed having criteria's like Alignment, Colour, Edge, Cracks/Marks, Shape, Texture, Surface, Coat, Movement, *Shlakshna*, *Tanvi*, *Prakritivarnayukta*, *Ayama* (length), *Visthara* (Breadth). After analysis of collected data it was concluded that out of fourteen anatomical properties explained Alignment, Colour, Edge, Cracks/Marks, Shape, Texture, Surface, Coat, Movement, *Prakritivarnayukta*, *Ayama* (length), *Visthara* (Breadth) of tongue have strong association with *Doshapradhan (Dominant) Prakriti*. And tongue with *Shlakshna* and *Tanvi* property, have no significant association with *Doshapradhan (Dominant) Prakriti*. Since observations are on nominal scale, so for data analysis Chi-square test was applied, except *Ayama* (length) and *Visthara* (Breadth); where observations are quantitative, so for data analysis ANOVA test was applied for comparison among three groups.

Discussion on 14 criteria's was observed in three group's i.e *Vatapradhan*, *Pittapradhan*, *Kaphapradhan Prakrities* are following:

- **Alignment**

Out of 30 individuals of *Kapha Prakriti* all were having centrally aligned tongue.

Out of 30 individuals of *Pitta Prakriti* all were having centrally aligned tongue.

Out of 30 individuals of *Vata Prakriti* 23(76.7%) were having centrally aligned tongue. While 4(13.3%) individuals and 3(10%) individuals were having Right and left aligned tongue respectively.

So, it is observed that, 83(92.2%) individuals were having centrally aligned tongue. While 4(4.4%) individuals and 3(3.3%) individuals were having right and left aligned tongue respectively.

- **Colour**

Out of 30 individuals of *Kapha Prakriti* all were having pink coloured tongue.

Out of 30 individuals of *Pitta Prakriti* 8(26.7%) individuals and 22(73.3%) individuals were having pink and red coloured tongue respectively.

Out of 30 individuals of *Vata Prakriti* 4(13.3%) individuals were having Pale coloured

tongue. While 26(86.7%) individuals were having pink coloured tongue.

So, it is observed that out of 90 individuals 64(71.1%) individuals were having pink coloured tongue. While 22(24.4%) and 4(4.4%) individuals were having Red and Pale coloured tongue respectively.

- **Edge**

Out of 30 individuals of *Kapha Prakriti* the edge of tongue of 9(30%) individuals was dented and 21(70%) individuals were same as tongue body.

Out of 30 individuals of *Pitta Prakriti* the tongue edge of 10(33.7%) individuals, 2(6.7%) individuals and 18(60%) individuals was dented, eroded and same as tongue body respectively.

Out of 30 individuals of *Vata Prakriti* tongue edge of 15(50%) individuals, 3(10%) individuals and 1(3.3%) individual were dented, eroded and same as tongue body respectively.

So, it is observed that out of 90 individuals 45(50%) individuals were having dented edge of their tongue. While 40(44.4%) individuals were having tongue edge same as tongue body while 5(5.6%) individuals were having eroded tongue edge.

- **Mark/Cracks**

Out of 30 individuals of *Kapha Prakriti* 24(80%) individuals were having tongue with no mark/cracks. 1(3.3%) individuals and 5(16.7%) individuals were having cracks and cuts on their tongue respectively.

Out of 30 individuals of *Pitta Prakriti* 28(93.3%) individuals were having tongue with no mark/cracks. While 2(6.7%) individuals were having cuts on their tongue.

Out of 30 individuals of *Vata Prakriti* 15(50%) individuals were having tongue with no mark/cracks. While 7(23.3%) individuals, 6(20%) individuals, 2(6.7%) individuals were having cracks, cuts, lines on their tongue respectively.

So, it is observed that out of 90 individuals 57(63.3%) individuals were having no mark/cracks on their tongue. While 7(7.8%) individuals were having cracks, 13(14.4%) individuals were having cuts, 2(2.2%) individuals were having lines on their tongue



respectively.

- **Shape**

Out of 30 individuals of *Kapha Prakriti* the shape of tongue of 17(56.7%) individuals was oval triangular, of 13(43.3%) individuals was short and wider shape tongue.

Out of 30 individuals of *Pitta Prakriti* 14(46.7%) individuals were having long narrower shaped tongue. While 16(53.3%) individuals were having wider shaped tongue.

Out of 30 individuals of *Vata Prakriti* 15(50%) individuals were having long, narrower shaped tongue. While 15(50%) individuals were having long, wider shaped tongue.

So, it is observed that out of 90 individuals 29(32.2%) individuals, 17(18.9%) individuals, 16 (17.8%) individuals, 15(16.7%) individuals, 13(14.4%) individuals were having long-narrower, oval-triangular, wider, long-wider and short-wider shaped tongue respectively.

- **Texture**

Out of 30 individuals of *Kapha Prakriti* all were having visible buds on their tongue.

Out of 30 individuals of *Pitta Prakriti* 1(3.3%) individuals was having uneven tongue texture. While 29 (96.7%) individuals were having visible buds on their tongue.

Out of 30 individuals of *Vata Prakriti* 4(13.3%) individuals were having tongue with uneven texture. While 26 (86.7%) individuals were having visible buds on their tongue.

So, it is observed that out of 90 individuals 85(94.4%) individuals were having tongue texture with visible buds. While 5(5.6%) individuals were having uneven tongue texture.

- **Surface**

Out of 30 individuals of *Kapha Prakriti* all were having tongue with even surface.

Out of 30 individuals of *Pitta Prakriti* 1(3.3%) individual was having tongue with bulging surface. While 29(96.7%) individuals were having tongue with even surface.

Out of 30 individuals of *Vata Prakriti* 3(10%) individuals were having tongue with bulging surface. While 1(3.3%) individual was having deep surfaced tongue and 26(86.7%) individuals were having even surfaced tongue.

So, it is observed that out of 90 individuals 4(4.4%) shows bulging tongue surface. While 1(1.1%) individual show deep surface. While 85(94.4%) individuals shows even surface tongue.

- **Coat**

Out of 30 individuals of *Kapha Prakriti* 18(60%) individuals were having thin coating on their tongue. While 12(40%) individuals were having white coating on their tongue.

Out of 30 individuals of *Pitta Prakriti* 22(73.3%) individuals were having thin coating on their tongue. While 2(6.7%) individuals and 6(20%) individuals were having white and yellow coating on their tongue respectively.

Out of 30 individuals of *Vata Prakriti* 24(80%) individuals, 4(13.3%) individuals, 2(6.7%) individuals were having thin, white, yellow coating on their tongue respectively.

So, it is observed that out of 90 individuals 64(71.1%) individuals shows thin coating on their tongue. While 18 (20%) individuals and 8(8.9%) individuals show White and Yellow coating on their tongue respectively.

- **Movement**

Out of 30 individuals of *Kapha Prakriti* 7(23.3%) individuals and 23(76.7%) individuals were showing shaky movements and still (no movements) of their tongue respectively.

Out of 30 individuals of *Pitta Prakriti* 8(26.7%) individuals were showing shaky movements of their tongue and 22(73.3%) individuals were showing still (no movements) of their tongue.

Out of 30 individuals of *Vata Prakriti* 27(90%) individuals were showing shaky movements of their tongue. And 3(10%) individuals were showing still (no movements) of their tongue.

So, it is observed that out of 90 individuals 42(46.7%) individuals were having tongue with shaky movements. And 48(53.3%) individuals were having tongue with no movements (still).

- **Shlakshna**

Out of 30 individuals of *Kapha Prakriti* all were having *Shlakshna* tongue. Out of 30 individuals of *Pitta Prakriti* all were having *Shlakshna* tongue. Out of 30 individuals of *Vata Prakriti* all were having *Shlakshna* tongue.

So, it is observed that out of 90 individuals all were having *Shlakshna* tongue.

- **Tanvi**

Out of 30 individuals of *Kapha Prakriti* all were having *Tanvi* tongue. Out of 30 individuals of *Pitta Prakriti* all were having *Tanvi* tongue. Out of 30 individuals of *Vata Prakriti* all were having *Tanvi* tongue.

So, it is observed that out of 90 individuals all were having *Tanvi* tongue.

- **Prakritivarnayukta**

Out of 30 individuals of *Kapha Prakriti* all were having pink coloured tongue.

Out of 30 individuals of *Pitta Prakriti* 8(26.7%) individuals and 22(73.3%) individuals were having pink and red coloured tongue respectively.

Out of 30 individuals of *Vata Prakriti* 4(13.3%) individuals were having Pale coloured tongue. While 26(86.7%) individuals were having pink coloured tongue.

So, it is observed that out of 90 individuals 64(71.1%) individuals were having *Prakritivarnayukta* (pink coloured) tongue. While 22(24.4%) and 4(4.4%) individuals were having Red and Pale coloured tongue respectively.

- **Ayama (Length)**

Out of 90 individuals, *Ayama (Length)* is more in *Vata Prakriti* individuals as compared to *Pitta Prakriti* and *Kapha Prakriti* individuals.

- **Visthara (Breadth)**

Out of 90 individuals *Visthara (Breadth)* is more in *Kapha Prakriti* individuals as compared to *Vata Prakriti* and *Pitta Prakriti* individuals.

## CONCLUSION

- After studying and reviewing detail *Ayurvedic* and modern literature, observations and result, discussion and on the basis of observations made, it can be concluded that there is significant association between *Jivha* variations and *Doshapradhan Prakriti* except *Shlakshna* and *Tanvi Guna* of *Jivha* (Tongue).
- It is concluded that, *Anavasthit Jivha* i.e *Jivha* with features of longer, narrower, dented,

*eroded, cracks, cuts, lines, irregular shape etc.* was found more in *Vatadosha* dominant *Prakriti*.

- While *Tamravarni* and wider *Jivha*, was found more in *Pittadosha* dominant *Prakriti*.
- And Short and wider tongue was found more in *Kapha Dosha* dominant *Prakriti*.
- It can be concluded that after this detail study work, *Jivha Parikshan* can be used to assess *Prakriti* of the individual as a tool according to *Rachana Sharir*.
- It can help us to understand different patterns of speech, taste etc. in Different *Prakritis*.

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