



“A STUDY ON PRAMANA SHAREERA - ANTHROPOMETRY”

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Abstract: *Ayurveda* adopts a dynamic and innovative approach to health, emphasizing individualized care both in managing health and treating diseases. It is a comprehensive health science that not only covers knowledge about the body and diseases but also promotes healthy living, or “*Swastha*”. A key contribution of *Ayurveda* is the concept of *Maana-Pramana*, which includes various measurement techniques such as *Anjali Pramana* and *Anguli Pramana*. The *Swa-Anguli* (one’s own finger’s breadth) serves as a unit of measurement for body parts and structures. The significance of *Pramana* is evident in *Ayurveda*’s core principles, as the *Mana/Pramana* of *Hitayu*, *Ahitayu*, *Sukhayu*, and *Dukhayu* forms the foundation of *Ayurvedic* practice. *Pramana Shareera* can be seen as a scientific tool for research, valuable not only in diagnosing diseases (*Roga*) and evaluating patients (*Rogi*) but also in supporting the scientific validity of *Ayurveda*. In modern science, *Pramana Shareera* corresponds to Anthropometry, which focuses on physical measurements such as height and age. Anthropometry also examines the human body’s components, including bones, adipose tissue, and muscles, and assesses their correlation with systemic and lifestyle disorders.

Index Terms - *Pramana Shareera* , *Anjali Pramana* , *Anguli Pramana* , Anthropometry.

I. INTRODUCTION

The term *Pramana* also refers to specific types of measurements, such as *Angula* (finger breadth). *Pramana Shareera* is the primary tool used to determine an individual’s lifespan (*Ayu*). *Classical* texts explain the *Anguli Pramana* for various body parts, providing a framework for assessing health. The descriptions of these measurements by the *Acharyas* enhance the evaluation of a patient’s condition (*Rogi Pariksha*). Since, No two individuals are exactly alike in physical, physiological, psychological, or vital aspects, *Ayurveda* emphasizes a personalized approach to health. The term “*Swastha*” reflects this focus on individuality, with “*Swa*” denoting one’s unique constitution.¹

In *Ayurveda*, measurement of the body and its parts is described using two methods. One is *Anguli Pramana* and another one is *Anjali Pramana*. In the era of *Susrutacharya* & *Charakacharya* *Swa-anguli Pramana* is used for estimating the *Anga-pratyanga* & other body constituents. *Ayama*, *Vistara* & *Parinama* etc are measured by the exploit of *Swa-anguli Pramana* where as other body constituents including the fluid are considered by applying the knowledge of *Swena-anjali Pramana*.²

According to *Susrutacharya* before starting a treatment for an *Atura* (Patient), physician has to examine many things including *Ritu*, *Agni*, *Vaya*, *Deha*, *Bala*, *Satva*, *Satmya*, *Prakruti*, *Bheshaja* & *Desha*. For the examination of *Ayu*, *Anguli Pramana* is one of the criteria. Here, *Pramana* of *Anga-pratyanga* has to be taken, the individuals with appropriate *Anguli-Pramana* have *Deerghayu*, *Ayu* will be more or less if there is difference of *Pramana*.

Anthropometry is the systematic, quantitative study of the human body, derived from the Latin words 'Anthropos,' meaning human, and 'Metry,' meaning measurement. It involves the analysis of the body's dimensions, including bone, muscle, and adipose (fat) tissue. This science provides physical measures of a person's size, shape, and functional capacities, and involves the organized collection and correlation of body measurements.

Anthropometric data serve as proxy indicators for a variety of assessments, including health status, physique, obesity, growth and development, nutritional status, economic conditions, human evolution, skeletal frame size, and sports and physical strength.

Anguli Pramana

An *Anguli Pramana* is one of the *Shareera Pramana* tool for determining various measurements of the body parts. As length and breadth of fingers of every person is differ from each other. That's why to measure the *Anga pratyanga*, own *Anguli Pramana* is taken to measure the body Parts, this is called as *Swanguli Pramana*. Specification for *Anguli Pramana* for the measurement is taken as a length of proximal Interphalangeal joint(of right hand) and considered as *Swanguli*. So, *Swanguli Pramana* (self finger) is considered as a length of proximal inter phalangeal joint. (Specifically considered of right hand).³

In the *Athuropakramaniya Adhyaya*, *Susrutacharya* explains that individuals with well-proportioned *Anga-pratyanga Pramana* are likely to have a long lifespan (*Deerghayu*), good health, and optimal vitality, and that variations in these measurements can be addressed with similar interventions. The *Ashtanga Hrudayakar* also notes that a person with appropriate *Pramana* is likely to enjoy good health (*Sukhayu*). According to *Susrutacharya*, the average height of a man is 120 *Angula*. *Dalhana* adds that height should be measured when the individual is standing on their toes and raising their arms upward.⁴

Charakacharya and *Vagbhatacharya* state that the total height of the body is 84 *Angula*, with this measurement being consistent in both length and breadth. *Vagbhatacharya* adds that a height equivalent to three and a half *Hasta* of one's own arm is ideal for a healthy and happy life. These measurements are not applicable to individuals categorized as the eight types of *Nindita Purusha*.^{5,6}

During the time of *Charakacharya* and *Susrutacharya*, *Angula* was used as the standard unit of measurement for length. According to their guidelines, 84 *Angula* is considered the optimal height for a normally healthy individual, though slight variations may occur due to genetic and other factors.

Bhela point out that the person comprising of *Lalata*, *Nasika* & *Karna* of length 6 *Angula* has life span of 100 years.⁷

Table 1. Comparison of the Height of the Individual explained by Different Acharya.

Total	Acharya Sushruta	Acharya Caraka	Acharya Vagbhata
Height	120 Angula	84 Angula	3 and Half hasta /84 Angula
Breadth	-	84 Angula	84 Angula

Table 2: Measurement of lower Limb in Angula⁸

Name of the body Parts	Acharya Sushruta				Acharya Caraka				Acharya Vagbhata			
	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda
Lower limb												
<i>Padangusta</i>	2								2			
<i>Padamshini</i>	2								2			
<i>Madhyama</i>	9/5								9/5			
<i>Anamika</i>	8/5								8/5			
<i>Kanishtika</i>	4/5								7/5			
<i>Parade</i>	4	5							4	6		
<i>Padatala</i>	4	5							4	5		

Parshini	5	4						4	4	4		
Pada	14		14		14	6		4	14		14	4
Jangha	18		14		18		16		18		14	
Janu			14		4		16		4			
Uru + Janu	50											
Gulpha			14						14		14	
Uru	18		32		18		30		18	6	30	

Table 3: Measurement of Upper Limb in Angula

Name of the body Parts	Acharya Sushruta				Acharya Caraka				Acharya Vagbhata			
Upper Limb	Ayam a	Vistara	Parigaha	Utseda	Ayama	Vis tar a	Parigah a	Utsed a	Ayama	Vistar a	Parigah a	Utsed a
Angushta	3 ½								3 ½			
Padamshin	4 ½								4 ½			
Kanishtik	4 ½								3 ½			
Madhyama	5								5			
Pani									12			
Hastatala	6	4										
Angabula padamshini	5											
Manibandha Karpura Sandhi	16											
Hasta	24				12							
Prabhau					16				16			
Bhuja	32											
Skandha					8				8			
Amsa					6				6			
Kaksha					8				8			
Prapani					8				8			

Table 4 : Measurement of Head and Neck in Angula

Name of the body Parts	Acharya Sushruta				Acharya Caraka				Acharya Vagbhata			
Head and Neck	Ayam a	Vistar a	Parigah a	Utseda	Ayam a	Vistar a	Parigah a	Utsed a	Ayama	Vistar a	Parigah a	Utsed a
Chibuka	2					4			4			
Darshana	2											
Anaha	2						24	12			24	12
Nasaputa	2									1/3		
Karnamula	2											
Bhunvanantara		2										
Vadana	4											
Nasavansha	4				4				4			
Karpa	4				4				4			
Lalata	4				4				4			
Greeva	4		24									
Netra									2			
Akshimadhya						4						
Shravanaapang	5											

<i>a</i>												
<i>Mukha</i>	12		24									
<i>Nasaputa</i>		1 1/3							1/3			
<i>Taraka</i>		1 1/3 of nayan a										
<i>Keshantamastak a</i>	11											
<i>Karnavitannara</i>		14										

Table 5 : Measurement of Trunk in Angula

Name of the body Parts	<i>Acharya Sushruta</i>				<i>Acharya Caraka</i>				<i>Acharya Vagbhata</i>			
Trunk	<i>Ayam a</i>	<i>Vistar a</i>	<i>Parigah a</i>	<i>Utseda</i>	<i>Ayam a</i>	<i>Vistar a</i>	<i>Parigah a</i>	<i>Utsed a</i>	<i>Ayam a</i>	<i>Vistar a</i>	<i>Parigah a</i>	<i>Utsed a</i>
<i>Vrushna</i>	2				6		8		6		5	
<i>Mehana</i>	4								6		5	
<i>Bhaga</i>			12				12					
<i>Mahana Nabhi</i>	12											
<i>Nabhi hrudaya</i>	12											
<i>Prushta- uraha</i>						24				24		12
<i>Kati</i>		18				16				16	50	
<i>Vastishiraha</i>					10				10			
<i>Udara</i>					12	10			12			
<i>Parsha</i>					12	10			12	10		
<i>Stana</i>					2				2			
<i>Stanantara</i>		12				12			12			
<i>Stri- ura</i>		18										
<i>Hrudaya</i>					2				2			
<i>Trika</i>								12				12
<i>Shepha</i>					6		5					
<i>Prushta</i>								18				18

Anjali Pramana :

Anjali Pramana was a crucial measurement tool during the *Samhita* period for assessing body constituents such as *Rasa* and *Rakta*. This unit is formed by joining both palms at the little finger to create a shape of *samputa*(cup like), and it is also known as *Kudava* or *Ardhasharava*. *Sharangadhara* noted that *Kudava* is used for measuring volume and is typically a cylindrical cup made of mud, wood, or metal. The dimensions of a *Kudava* are four *anguli* in height, depth, and breadth. One *Kudava* equals two *Prasrti* and is also equivalent to one *Anjali*. It is noted that the *Anjali Pramana* for a specific *Drava Bhava* (liquid state) is unique to each individual, referred to as "*Swena Anjali Pramanena*."⁹

Table 6: Comparison between Magadha Mana & Kalinga Mana

<i>Magadha Mana</i>	<i>Kalinga Mana</i>
One kudava =one anjali One Anjali= two prasrti Two prasrti= four pala (one prasrti = two pala)	One kudava =four pala

Table 7: Anjali Pramana of different body components - According to different Acharyas

Tissue / fluid	Acharya Caraka	Acharya Vagbhata
Udaka	10	10
Ahara rasa	9	9
Shonita	8	8
Purisha	7	7
Shleshma	6	6
Pitta	5	5
Mutra	4	4
Vasa	3	3
Meda	2	2
Majja	1	1
Mastishka	½	½
Shukra	½	½
Shleshma	½	-
Ojas (Apara)	½	½
Ojas (Para)	8 Bindu	-
Stanya	-	2
Raja	-	4

Table 8: According to Acharya Caraka , Important tissue Pramana has been explained

Shleshma	6 Anjali
Pitta	5 Anjali
Vata	Chanchala(Unstable)

Applications of Pramana Shareera

- The use of *Swa Angula Pramana* is evident in various contexts, such as in the preparation of *Shastras* and *yantras* related to *Shalya*, *Shalakhya*, and *Panchakarma*. These tools are likely crafted based on the *Swa Angula Pramana* of the patient undergoing treatment.
- An individual with well-proportioned *Anga-Pratyanga* measurements is believed to have longevity, wealth, prosperity, happiness, *ojas*, strength, and other positive attributes.
- The measurements specified in classical texts for different body parts are considered ideal and desirable. Deviations from these measurements suggest abnormalities or undesirable conditions.
- *Swa Angula Pramana* is useful for measuring various body parts.
- It is one of the ten methods of examination and plays a role in assessing the lifespan (*Ayu*) of the patient.
- It aids in understanding the prognosis of diseases.
- By using *Anjali* and *Anguli Pramana*, one can evaluate the health of an individual.
- This method helps identify *Nindita Purusha* as described in *Ayurvedic classics* and assess individuals categorized as *Atideergha* and *Atiharsava Purusha*.
- In practical *Ayurveda*, *Pramana Shareera* data can be applied to determine unknown measurements by referencing known measurements.

Discussion :**Importance of Swa- Anguli Pramana:**

Since, No two individuals are exactly alike in their physical, physiological, psychological, or vital responses, *Ayurveda* emphasizes a personalized approach to health. The concept of "Swastha" highlights this focus on individuality, with "Swa" representing one's unique constitution. Ancient sages of India, like *Charaka* and *Sushruta* have built up their system of health and disease on this bed-rock of individual constitution.

To determine the balance of the body's elements, a physician must assess signs of optimal health specific to each person, such as *Samadosha* (balanced doshas), *Samaagni* (balanced digestive fire), *Samadhatu* (balanced bodily tissues), and *Sama Malakriya* (proper elimination). Measurement systems like *Anjali Pramana* (palm measurement) and *Anguli Pramana* (finger measurement) were used to evaluate these elements. In an era without standardized measurements or advanced instruments, these methods provided both a unit of measurement and the flexibility to be personalized for each individual.

For determining the Unknown measurements from the know measurements –

It can be well understood by an example, as if the cut upper limb or any other body part is obtained, the data of *Pramana Shareera* and these proportions of the human body can be used to determine the height and all other body measurements of the individual. It becomes further significant when observed that even if a cut digit of the individual is obtained, a scientific estimation of all his body measurements can be indirectly made based on data obtained from the analysis of references related to *Pramana Shareera*.

Acharyas explains that the body's features and the balance of *doshas*, *dhatu*s, and *malas* vary from person to person and can be unstable, accurate statements are challenging. According to *Charaka*, "*Swena Anjali Pramanena*" means that the *Anjali Pramana* depends on individuality. Today, these *Ayurvedic parameters* should be adapted and expressed in a manner that is globally acceptable.

Conclusion

The concept of *Pramana Pareeksha* in *Ayurveda* allows for personalized assessments, tailored to each individual's unique characteristics. This approach is crucial for evaluating aspects such as an individual's lifespan (*Ayu*), strength (*Bala*), disease prognosis, and overall well-being, including health, wealth, and happiness. Since, *Ayurveda* recognizes that no two people are identical in physical, physiological, psychological, or vital responses, relying on fixed, standard parameters for measurement would be inadequate. Therefore, *Ayurveda* employs *Pramana Pareeksha* to accommodate these individual differences and provide a more precise evaluation for each person.

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