



A Systematic Review: Significance Of *Anguli Pramana* And Method Of Measurement In Ancient Times.

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ABSTRACT:

The terms *Pramana* and metry are associated with measurement. *Anguli Pramana*, as described in *Ayurveda*, is utilized for patient examination. In ancient times, *Ayurveda* served as a significant medical system, with *Anguli Pramana* playing a key role in anatomical assessments. This method involved individuals measuring the length and breadth of various body parts using their fingers, known as *Anguli Pramana*. *Swanguli Pramana* refers to measuring one's own body parts. This practice serves as a *Sharira Pramana* tool for determining body part measurements. *Angula Pramana* quantitatively expresses the magnitudes of human body parts, with appropriate measurements believed to bring longevity, prosperity, happiness, wealth, *Ojas*, and strength to an individual with well-proportioned *Anga-Pratyangas*. The *Angula Pramana* technique is an age-old method used to quantitatively determine the proportions of the human body. Measurements for *Anguli Pramana* should be taken at the midpoint between the proximal interphalangeal joints of the middle fingers on both the right and left hands, while considering the specific individual being measured. This approach emphasizes the importance of tailoring measurements to each person rather than relying on generalized standards.

KEY WORDS: *Anguli Pramana*, *Pramana Sharira*, Anthropometry

INTRODUCTION:

In *Ayurveda*, the importance of the *Sharira* is emphasized greatly. A thorough understanding of the human body is crucial for a physician to promote overall health and well-being. Major *Samhitas* provide detailed descriptions of the anatomy and physiology of the human body in the *Sharira Sthana* section. Additionally, other parts of the *Samhitas* offer valuable insights on clinical examinations and important aspects of the body. The concept of *Pramana* holds significant importance in *Ayurveda*. In *Sharngadhara Samhita*, *Maana* is categorized into two types: *Kalingamaana* and *Magadhamaana*. These measurements pertain to the dimensions of entities, substances, parameters, and so on. The characteristics of *Maana* vary depending on the nature of the entity or substance being measured. *Maana* can be further subdivided into *Payamaana*, *Druvayamaana*, and *Pautavamaana*. *Payamaana* is used for measuring lengths of body parts, medical instruments, and various parameters related to length. *Druvayamaana* is utilized for measuring volumes of liquids and amounts of fluids, while *Pautavamaana* is employed for measuring weights of different substances.

Anthropometry encompasses the systematic collection and correlation of measurements of the human body. Derived from the Greek words 'Anthropos' meaning human and 'Metry' meaning measurement, Anthropometry provides scientific methods and techniques for taking various measurements and observations. It is the science that defines physical measures of a person's size, form, and functional capacities. Various measurements of different body parts, including segmental lengths, bodily breadth, circumferences of trunks and limbs, as well as the thickness of skin and subcutaneous tissue folds, are utilized in the design of instruments and equipment for human use. This field encompasses a range of measurements pertaining to the human body, such as pelvimetry, craniometry, osteometry, skin fold thickness, height, and weight measurements, among others. The ancient *Ayurvedic* texts contain numerous theoretical concepts, one of which is the subdivision known as *Pramana Sharira*. This section emphasizes the significance of measurements and Anthropometry in *Ayurveda*. The terms '*Pramana*' and 'metry' are linked to the practice of measurement, as described in *Ayurvedic* literature for assessing the patient's body. According to *Ayurveda*, the concept of measurements for different biological entities is explained through the term "*Pramana*." Various types of *Pramanas*, such as *Anjali Pramana* and *Anguli Pramana*, are mentioned in this context. Among these, *Anguli Pramana*, specifically the *Sharira Pramana*, is considered the sole tool for determining an individual's *Ayu* (lifespan). A comprehensive understanding of the *Sharira* (body) at all times is crucial for a physician in order to promote a healthy life for humanity. In all major *Samhitas*, give description of human body in both anatomical and physiologically. All the major *Samhitas* have a separate section of *Sharira Sthana*. But also

other point of view for various clinical examination and valuable parts also described in the other part of *Samhitas*. *Anguli pramana* is one of the significant concepts in *Ayurveda*. Understanding the complete knowledge of *Sharira* is essential for a physician. According to Acharya *Sushruta Samhita*, the human body can be grossly divided into six major components: two upper extremities, two lower extremities, trunk, thorax, abdomen, head, neck, and face¹. During the era of *Sushruta* and *Charaka*, the proportions of the body were measured using *Anguli Pramana*, where various body parts were measured using one's own fingers as a unit of measurement. This ancient method of measurement using *Anguli* appears to be a natural and scientific approach. *Ayurveda* emphasizes an individualistic approach rather than a generalized one².

OBJECTIVES:

1. To study the concept of *Anguli Pramana* in *Ayurvedic Samhitas*.
2. To understand the method of measurement of body parts in *Ayurveda*.
3. To study concept of *Anguli Pramana* for measurement of *Sharira Pramana*.

MATERIALS AND METHODS

Literary source All possible review of the available literature on the *Anguli Pramana* done from classical text of *Ayurveda*, data also collected from various books, periodicals, thesis and papers published in the e-journal etc.

ANGULI PRAMANA:

Acharya *Charaka* has included *Pramana* among the *Dashavidha Parikshyabhavas*. *Ayupariksha* is an important procedure before starting with the treatment. *Ayupariksha* is done particularly on the basis of measurement of different *Angapratyanga* of the body. The assessment and classification of *Sharirik Bala* (immunity) i.e. *Uttam Bala* (Good immunity) and *Heen Bala* (poor immunity) and *Madhyam Bala* (moderate immunity) can be examined with the help of *Anguli Pramana*³.

During the ancient era of *Charaka* and *Sushruta*, individuals measured the dimensions of various body parts by using their own fingers. This technique, known as *Anguli Pramana*, was commonly used to determine the length and breadth of different *Anga-Pratyanga* in the human body.

Anguli pramana refers to the technical terms used to describe the distal and movable parts of the upper and lower limbs. There are twenty *Angulis* in total, classified into five types: *Angushta*, *Tarjani/Pradeshini*, *Madhyam Anguli*, *Anamika*, and *Kanishta*.

The *Anguli Pramana* is a unit used to measure length, breadth, and circumference. It can be defined in three ways:

1. as the width of the *Madhyama Parva* of the *Madhyama Angula*,
2. as the measurement obtained by dividing the length of the *Madhyama Angula* by five,
3. as the measurement obtained by dividing the width of the palm by four.

The measurement of *Anga-Pratyanga* is unique to each individual due to variations in the length and breadth of fingers. To measure this, one's own *Anguli Pramana* is used, which is known as *Swanguli Pramana*. The specific *Anguli Pramana* for measurement is the length of the proximal interphalangeal joint of the right hand, referred to as *Swanguli*. Therefore, *Swanguli Pramana* (Self finger) is defined as the length of the proximal interphalangeal joint of the right hand⁴. The *Pramana Sharira* serves as a valuable scientific tool for conducting research in *Ayurveda*. It is not only beneficial for examining diseases and patients, but also plays a crucial role in providing evidence for the scientific rigor of *Ayurveda*. *Pramana*, an ancient research method of great importance in the development of research methodology in *Ayurveda*, can be achieved through the use of *Pramana*⁵. In modern science, *Pramana Sharira* is simply anthropometry, a technique exclusively utilized for physical measurements such as height and age. The anthropometry aspect of the current system is characterized as the examination of the human body in relation to bone structure, adipose tissue, and muscle mass, all correlated with the risk of systemic and lifestyle-related disorders. The *Aayaam* (Vertical height) of the any individual's whole body should be 84 *Angula* and *Aayaam* should be equal to *Vistaar* (Arm span or horizontal height) of the body. The person having *Aayaam* (vertical height) and *Vistaar* (Arm span) equal to each other is known as *Sama Purusha* (Anatomically proportionate healthy person) and these Person will have *Uttam Ayu* (longevity), *Bala Oja*, *Sukha*, *Aishvarya*, *Vita* (wealth). The Person having *Anguli Pramana* more than 84 *Angula* or less than 84 *Angula* will have *Ayu*, *Bala*, *Oja*, etc. *Madhya* (moderate) or *Heena* (Poor)⁶.

DISCUSSION:

Ayurveda, the ancient science of life, encompasses centuries of accumulated wisdom regarding the human body, its functions, methods for maintaining health, and strategies for addressing diseases through a logical and repeatable scientific approach using available resources of the time. This knowledge can be categorized into three main aspects: *Hetu* (the cause of disease), *Linga* or *Lakshana* (symptoms of disease), and *Aushadha* (treatment of disease, whether medicinal or procedural). These three pillars of *Ayurveda* are known as *Triskandha* or *Skandha Traya* in the field.

The primary goal of the development of *Ayurvedic* knowledge was to promote the health of individuals and effectively treat diseases. The first step in treating any illness is to accurately diagnose it through the process of *Pareeksha* or examination. The *Dashavidha Atura Pariksha*, a tenfold examination of the patient, provides a comprehensive assessment of the individual's condition, taking into account their general nature and the circumstances surrounding their illness. When viewed from an anatomical perspective, the *Dashavidha Pariksha* helps to determine the extent to which the individual deviates from a state of normalcy. Understanding what constitutes normal physiology is crucial in identifying any deviations, highlighting the importance of subjects such as anatomy in the diagnostic process. Within the *Dashavidha Pariksha*, the evaluations of *Sara*, *Samhanana*, and *Pramana* necessitate a foundational understanding of anatomy. Detailed descriptions of *Sharira Pramana*, or body measurements, can be found in all major *Samhitas*, providing invaluable insights into the level of anatomical knowledge and comprehension prevalent during the era of their composition. A noteworthy contribution of our esteemed *Acharyas* in this regard was the creation of a suitable unit of measurement for the human body at a time when standardized measures and measuring instruments were not commonly available. This not only established a consistent measuring standard but also allowed for personalization, ensuring specificity for each individual.

Angula Pramana serves as a method for accurately quantifying the sizes of various human body parts. In *Ayurveda*, the traditional system of measurements, such as *Anjali Pramana* and *Anguli Pramana*, is utilized for assessing the *Doshas* and *Dhatus* in the body⁷. According to *Acharya Charaka*, it is included in the list of *Dashavidha Pariksha Bhava*. To evaluate the patient, measurements of different body parts should be taken using the standard unit of *Swaangula Pramana*. In *Ayurvedic* classics, two main types of *Pramana* are commonly mentioned: *Anjali Pramana* and *Anguli Pramana*. *Anjali Pramana* is used for measuring body constituents, including fluids. *Anguli Pramana*, on the other hand, is based on *Swaangula Pramana* and is used for measuring the dimensions (such as *Ayama*, *Vistara*, and *Parinaha*) of different parts of the body. This concept of *Anguli Pramana* is unique to *Ayurveda* and distinguishes it from other medical systems⁸. "Ayupariksha is a crucial preliminary step prior to commencing treatment. According to *Ayurvedic* principles, *Pramanataha Pariksha* serves as one of the criteria for determining the age of the patient. *Sushrutacharya* has detailed *Anguli Pramana* as a method for evaluating the lifespan and financial status of an individual. Those individuals who have appropriate measurements of their *Anga Pratyangas* will achieve *Deergh-Ayu*, while those with moderate or poor measurements will achieve *Madya* or *Alpa Ayu*, respectively." The evaluation of *Sharirik Bala* (immunity), including *Uttam Bala* (Strong immunity), *Heen Bala* (Weak immunity), and *Madhyam Bala* (Moderate immunity), can be conducted using *Anguli Pramana*⁹.

According to *Ashtanga Hrudaya*, having a height equal to 3.5 times one's own hasta is believed to lead to a happy life, although this does not apply to *Ashtanindita Purusha*. There is a discrepancy between *Sushruta* and *Charaka* regarding the height of a person in *Angula Pramana*. *Sushruta* states that the height of a man is 120 *Angulas*, with *Dalhana* suggesting that this should be measured with the person standing on their toes and arms raised above their head. On the other hand, *Chakrapani* notes that *Sushruta's Angula Pramana* is smaller than that of *Charaka*, but ultimately there is no significant difference between the two. According to *Chakrapani*, both *Charaka* and *Vagbhata* believed that an individual's height is measured as 84 *Angulas* from *Padatala* to *Shirahparyanta*. *Charaka* introduced the concept of '*Sama Sharira*', where an individual with equal height and arm span is considered to have *Sama Sharira* and is likely to achieve longevity, strength, happiness, prosperity, vitality, etc.

The significance of *Pramana Shareera*, as based on *SwaAngula Pramana* (measurement of different body parts using fingers), is evident in its ability to accurately assess various body measurements. This method is an integral part of *Dashvidha Pariksha* (tenfold examination) and plays a crucial role in determining the lifespan (*Ayu*) of an individual. Additionally, it aids in identifying the abnormal body types (*Nindita Purusha*) as described in *Ayurvedic* texts. Furthermore, *SwaAngula Pramana* is instrumental in discerning individuals with excessive (*Atideergha*) or inadequate (*Atihrasva*) measurements.

CONCLUSION:

Anguli Pramana is a superior method for describing measurements in comparison to absolute measurements as it provides a unit of measurement. This ancient technique quantitatively expresses the scales of human body parts. To accurately measure *Anguli Pramana*, it is recommended to measure at the site of the average of the mediolateral proximal interphalangeal joint of the middle fingers of both the right and left hands. This ensures the appropriate calculation of one *Angula* as the average length at these specific sites, as opposed to the average of *Chatur Anguli* of both hands. *Anguli Pramana* is personalized to each individual due to variations in body proportions, yet standardized in its ratio measurement between the length of the part being measured and the *Anguli Maana*. This demonstrates the advanced level of *Ayurvedic* anatomy to the modern scientific community. *Anguli Pramana* has the potential to serve as evidence of the valuable contributions we can make to modern society by studying and understanding our ancient texts. By exploring and incorporating new *Ayurvedic* indices into the clinical examination process, we can enhance *Pramana Pariksha* and *Aakriti Pariksha* as outlined in *Dusvidha* and *Ashtvidha Pariksha*. This can lead to a more objective and mathematically-based analysis, replacing the current subjective assessments. The descriptions of anthropometry in the *Samhitas* provide a foundation for further exploration and application of

anthropometric concepts in *Ayurveda*. This shows the way for improved utilization of these concepts within the field.

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