



**Review Article**

**A Literature Review on Pramana (Ayama-Vistara) Pariksha with Special Reference to Anthropometry**

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**ABSTRACT:**

Ayurvedic authors described bodily measurements in the concept of Pramana Sharir. Acharya's of Ayurveda described a long list of measurements of different body parts in terms of Anguli Pramana i.e. Anguli (one fingure) taken as unit of measurement; also called "Ayama-Vistara Pariksha" by Acharya Charaka. Since the time immortal, knowledge of Physiology and Anatomy evolved from statutory open eye knowledge supported by statistical measurements.

Ayurvedic Anatomy and Physiology also put forth their knowledge in the same way; but with some different measuring units, available at that time.

The presented study is literature study of the concept of Pramana sharir with regards to the same parallel concept of Anthropometry of the modern science emerged afterwards.

**KEY WORDS:** Pramana Sharir, Anguli Pramana, Anthropometry.

**INTRODUCTION:**

Ancient Ayurveda physicians put forward their knowledge in the form of methodologies, which has become 'principles' and now they are called as 'Siddhanta'. While explaining various concepts of Ayurveda, ancient authors of Ayurveda adopted various methodological techniques, presented at that time, to explain or to establish the concept precisely. The main aim of Ayurveda is not to describe only the Siddhartha, but it is primly aimed towards the maintenance of Swasthya<sup>1</sup> (health). While studying the ancient treatises about the dimensions and measurements, it is very much clearly understood that technical conversation into various units and their use into practice of Ayurveda was on its highness. It can be seen that almost every body part is measured and expressed into the unit (Anguli Pramana) available at that time. For liquid materials, Anjali Pramana was got described. Furthermore different units and their intermodal conversion is also seen in the Granthas

where the weight, volume etc. of the substance is explained. Acharya also described the linear measures e.g. 'Yavodara', 'Aratni', 'Hasta' etc. It can be understood that the knowledge was not in the form of only descriptions and verses; it also has got statistical measurable importance. Quantitative terms were described, formulated, converted and calculated. The size of body parts were compared with some animals and objects. In short, Acharyas should be praised for their really effortful work and they should be studied for their correlation with modern, newly established principles like Anthropometry technique.

**Aims and Objectives -**

- To study the concept of Pramana (Ayama - Vistara) Pariksha
- To study the concept of Anthropometry

**MATERIALS AND METHODS :**

All available related textbooks, nationally and internationally published papers (online and print version), indexed journals, search engines like Google search, Google scholar, Pub med, Wikipedia were the materials used to study. The reviewing method to study the concept was adopted.

**Literature Review -**

The concept of 'Pramana' includes measurements of both solid and liquid constituents of the body. Ancient Ayurvedic authors adopted the measurement of 'One finger breath' as the standard unit of measuring system of that time (Swanguli Pramana). An adult Anguli Pramana (one finger breadth) is approximately the diameter of palmer surface of the thumb in its maximum convexity i.e. little distance to the distal phalanx of the thumb which approximately equals to 2.5 cm (one inch) as per Sushruta. Another unit of measurement described by Acharya is 'Hasta'. It is the length between bony protuberance of the back of the elbow (Olecranon process of ulna) and tip of the little finger which equals to 1.25 feet (37cm). Vyama is also basic measuring unit described in Ayurvedic Granthas which is the distance from axilla to the tip of little finger roughly equals to 2 feet ( 60 cms )

'Marichi', 'Vansi', 'Sarshapa', 'Tandula', 'Dhanyamasa', 'Yava', 'Masa', 'Sama', 'Vataka', 'Kola', 'Aksa', 'Sukti', 'Pala' etc. are the measuring terms and conversion units used to measure the weight of the substance, anciently.

'Anjali', 'Drona', 'Tula' etc. were the units of liquid measurements. Acharyas put forward their interconversion formulae to calculate the bigger sized substance of bigger weights and volumes.

'Muhurta', 'Yama', 'Ahoratra', 'Saptaha', 'Paksha', 'Masa', 'Ritu', 'Ayana', 'Samvatsara' were the terms used to quantify the time.

With respect to measurements of the body parts Acharya has given a long list <sup>2</sup> which is when correlated to modern measures of the body parts, seems very much equal. For example, 'Lalaata'(forehead) is given 4 Anguli <sup>4</sup> long as per Ayurvedic Acharya, which means it approximately equal's 9-11 cms. When measured the same with modern instruments, the length of persons falls into the same range. Most of the body parts when measured by both ancient and modern techniques

give the same value with a more or less minute difference. Acharya has given the measurements of body parts, as standard measurement. Very much different measurements "Heena" and "Adhika" acquire "Heena" or "Adhika" "Ayu" respectively.

Quantitatively, measuring, non invasive technique for determination of individual's body composition, measurement - recording and analyzing dimensions and body parts is the technique basic of the Anthropometry. Actually the much use of the Anthropometric technique is done to study the humans. Alphonse Bertillon<sup>5</sup> gave the name "Anthropometry" to the system of identification based on unchanging characters of certain measurements of human body parts. He found in his study that dimensions of some bones and structures in the human body remain practically constant during adult life. With these dimensional constants every individual would be found to be perfectly different from other. The system was immediately adopted to fix a person's identity. "Bertillonage" as it was called, became popular and was further applied for judicial administration. England followed the system up to 1894, afterwards "fingerprints" was also recommended with the Anthropometric data.

William Sheldon<sup>6</sup> in 1940 studied the Anthropometry with respect to evaluation of Somatotypes. He also gone through the Cesare's Lombroso's criminal anthropology and believed that criminal mentality could be predicted according to body type. Afterwards when he published his work, Sheldon ran into considerable controversy. Whatsoever the history is, the dimensional study consisting measurements of the body structures had gone ahead with respect to accuracy, technical, instrumental improvements; the concept remained the same i.e. Pramana Pariksha.

**OBSERVATION AND RESULTS :**

1. Ayurveda the ancient medical knowledge has given descriptive details of the measurements of bodily parts under the concept of "Pramana Pariksha".
2. Though the measuring techniques were crude and not so much accurate their formulae and interconversion techniques proves their scientific and statistical base.
3. The same concept of measurement was further developed and improved into the modern era and used extensively called the Anthropometry.

4. Anthropometry has also performed a vital role in personality identification, Somatotypes study, criminal anthropometry and many other applications.

#### CONCLUSION :

The measuring science was ancient and evolved with time and got improved with respect to precision and accuracy time to time.

The concept of Pramana Pariksha was scientific and statistical method of that time.

The Ayurveda, science of life, is the most ancient knowledge in the world. Ayurveda worked upon this aspect many years ago, so should be congratulated.

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