



**INTERNATIONAL JOURNAL OF  
MULTIDISCIPLINARY HEALTH SCIENCES**  
**ISSN: 2394 9406**

**“DEVELOPMENT IN WEIGHTS AND MEASUREMENTS”**

**Dr. Vinayak Mohan Garud<sup>1</sup>**

<sup>1</sup>Associate Prof. Sanskrit Samhita Siddhant,

Hon. Annasaheb Dange Ayurved Medical College and Research Center, Ashta

**Corresponding Author's Email ID:** [vinayakgarud73@gmail.com](mailto:vinayakgarud73@gmail.com)

**ABSTRACT:**

In ancient era, Man began to do exchange for the survival. In the primitive stages it was just the exchange. Afterwards man used the currency. The weights and measurements of the things were also the relative components and important parts of the business of that time. Various methods were adopted to measure the weights of thing. Some grains were used to measure the minute weights. The dimensional measures and the techniques were also in use. The metric system came afterwards.

The article reviews the development in weights and measurements.

**Keywords:** exchange, weights, measurements,

**AIMS AND OBJECTIVES:**

1. To study the concept of weights and measurements of the ancient times.
2. To study the development in the concept of weights and measurements

**INTRODUCTION:**

After the development of language, man began to find the stability of behavior, began to find consistency in the transaction. At that time man began to feel the need for a means of exchange. Then man started looking for currency. The Barter system existed in the early period. But when it was realized that there were many problems in it, parallel value systems began to be considered all over the world.

When considering the Asian continent, the first thought of parallel value is found in the value of the cow. In ancient times the value of gold was also reflected into the value of cow. Today, just as we reflect any value in dollars around the world, so in India it was reflected in the value of a cow.

**LITERATURE REVIEW:**

Many *Smruti* texts have thought about the concept of value. *Yadnyawalkyasmruti* and *Manusmriti* are the main *smriti* in those texts<sup>1</sup>. In India, grains or uniform sized seeds of plants were used as weights in early period. The first record of this is found in *Manusmriti*. The seed named ‘*Gunja*’ was used to weigh gold, silver and copper. The reason to select these seeds was these are uniform in weight and are not affected by time. In Arabic language, the word ‘*Carrob*’ means seed (a type of a seed) is the dimension. From this, the ‘*Carat*’ has become the measure of diamonds and other precious stones. From this, we can say, seeds may have been used to weigh in some other countries as well.

In *Manusmriti*, weight tables are made only for gold, silver and copper. But in everyday transactions, other weighing scales existed to measure grain and other items. Only weights are mentioned in *Manusmriti* and no measurements.

Gold, silver and copper coins began to be used for weighing since 7<sup>th</sup> century. The tools that are easily available in nature were being used as weights. The primary measurements were depended on the proportion of the organs of human body. One thing to note is that the methods of measuring solids, liquids and time are different. Values, weights, measurements and other related things are also considered in *Ayurveda* texts. Views on weights, measurements are especially found in *Sharangadhar Samhita*-one of the *Ayurveda* texts. Weights and measures are mentioned there as a dosage of medicines. These are given in the *Magadhi* definition in the sense that, the medicine can only be useful if it is taken in a certain dose. Corresponding proportions of measures are mentioned<sup>2</sup>.e.g.

**Table no. 01**

<i>1Trasarenu or Vanshi</i>	<i>30 Parmanu</i>
<i>6 Vanshi</i>	<i>1 Marichi</i>
<i>6 Marichi</i>	<i>1 Rai</i>
<i>3 Rai</i>	<i>1 Shiras</i>
<i>8 Shiras</i>	<i>1 Yava</i>
<i>4 Yava</i>	<i>1 Gunja</i>

In the above measure, measures from *Parmanu* to *Marichi* were not visible by

eyes. All these measurements were obtained from judgment. One thing to be noted here is that, these judgments are not changed even today and the proportions remain constant.

There is a lot of literature in the *Yadnya* system in terms of length and width. In *Yadnya*, all measurements were made on the basis of triangles and spheres. From this, various *kunda* were developed. The *Shrauta Sutra* and other *Sutra* texts deal with it in detail.

*Arya Chanakya* has written a description of the state system and economy during the *Chandragupta Mourya* period in his famous book ‘*Kautilya Arthashastra*<sup>3</sup>. In it, *Chanakya* not only mentions the weights and measures, but also explained how to do the weighing, the design, length and width of the weighing device. The tools used for weighing should be made of iron or stone available in *Magadha* and *Mekal* countries or which will not increase with water coating or decrease with heat.

Also corresponding proportions of then weights and measures are mentioned.

Various weights and measures came to India from the incursions. Different regions had different methods of dimensioning. Weights and measures in Greek culture were adopted by the Romans. The Romans used to make small and large sections of weights. These sections were in multiples of twelve. The Greek-Roman measure ‘feet’ spread all over Europe. It was used in Europe until the end of the 18<sup>th</sup> century. The British tried to bring some weights and measures from Europe to India during their rule.

Therefore, all the references in terms of value, weight-measurement and length-width need to be comparatively studied according to the texts. It is also important to consider the sequence of their development, the changes that have taken place in them and the important contexts that are used in the world today. In all these cases, it is necessary to think carefully about the reasons for the changes

that have taken place.

**CONCLUSION:**

The older form of weight and measurement was the use of some uniform seeds. Then with progression of time, the systems changed and techniques have got improved. The *Manusmriti* and other ancient treatises including Ayurveda has explored the systems of weighing and measurements of that time. These systems must be correlated with today’s available methods of measurements which may reveal new findings or systems

**REFERENCES:**

1. History of Ayurveda, Dr. Deepak Yadav Premchanda, Chaukhamba Surbharati Prakashan, Varanasi, 2004
2. Sharangdhardhar Samhita Page no. 7; by Ishwar Ashram Trust; Nirnaysagar press; Mumbai; 1914
3. Koutilya Arthashastram, Edited by Vishwanath Shastri Datarkar, Sampurnand Sanskrit University, Varanasi, 1991