



Research Methodology in Ayurveda Wsr to Fundamental Research

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ABSTRACT

Ayurveda, the known traditional and conventional system of medicine has thrived since time immemorial, thanks to its irrefutable and scientific basic principles. It is quite obvious that this glorious perpetuity must have some solid foundation in the form of research and analysis which has to be made up to date and up graded to a level which is in tandem with the contemporary medical science with the use of recent innovations in the science and technology. The Research in Ayurveda is based upon the various tools of investigation or examination known as 'Pramaana' in philosophical parlance and 'Pareeksha' in Ayurveda compendia. These methods employed in Ayurveda have to be elaborated and sufficed with the tools that augment its efficacy and utility in the contemporary medical knowledge vistas. The future prospects of Research in Ayurveda depends on the knowledge of the skills and scientific reasoning which relies on the outcome of the fundamental research in Ayurveda that aims to revamp the traditional approach still extant in Ayurveda, in the realm of the basic principles and study them with the scientific approach based on the objective parameters.

KEYWORDS : AYURVEDA, FUNDAMENTAL, RESEARCH, PAREEKSHA, PRAMAANA, BODY, ENVIRONMENT

Ayurveda, the science of life has developed in the background of Research as evident in the *Charaka Samhita*, the authentic text of *Ayurveda* medicine. With the aim of the long and healthy life, the seers started pondering over the science that can provide the desired remedy for the disease and maintain the health which per se suggests the existence of research.

The glorious past of the research methodology of *Ayurveda* is based on the tools of examination known as 'Pareeksha' in *Ayurveda* (*Charaka Samhita* sootra sthana chapter 11 verse 17) and inspired from the philosophical term of 'Pramaana' meaning the evidence or proof. These tools of examination include (i) The direct observation/ Perception (*Pratyaksha*) (ii) The inference (*Anumaana*) and (iii) The Authoritative testimonies or literature (*Aaptopadesa*). The modern day research also depends on these three basic tools whose efficacy has been augmented by the utility of the scientific and technological innovative devices that provide the objectivity to the subjectivity, which is the aim of Research. These methods of investigations have been devised to develop the backbone of the *Ayurveda* system in the form of the fundamental or the basic principles under the umbrella of the 'Fundamental Research'. It is the need of the hour that the *Ayurveda* basics proved in the new scientific light that expands the knowledge vistas to the untrodden path of medical science.

Among the three instruments of Research, the first includes the direct observation that pertains to the knowledge gained by the senses directly and instantaneously while the inference involves the logical reasoning and linking the cause with the effect. It is the link between the 'Cause and the Effect' which fulfil the lacuna and accomplishes the target of Research. The inference involves the fivefold statement (*Charaka Samhita Vimaana sthana chapter 8 verses 30-34*) which includes (a) The Statement of the Hypothesis/Problem (*Pratijna*) (b) The purpose and the design (*Hetu*) (c) Illustrative examples with the sample and the instruments including the scale (*Udaharana*) (d) Discussion or relating the example with the problem under consideration (*Upanaya*) (e) Conclusion (*Nigaman*). This method has been explained in *Ayurveda* and is utilized in the Research to maximum. The third tool is the authoritative testimony which is the base of the research as it forms the literary base which suggests the work accomplished and the scope of work to be done.

Prior to the commencement of the Research activity, the seers of yore have advised the tenfold examination (*Charaka Samhita Vimaana sthana chapter 8 verse 68*) which narrate and cover all the aspects of Research. These ten topics of examination are-

The *kaarana* (The Research Scholar) - The scholar who pursues a Research project. The Research scholar along with the knowledge of the concerned subject should essentially possess the qualities of perse-

verance and effort.

- The *karana* (The tools/instruments) - These are the tools or the instruments that are used by the research scholar in his due course of scientific experimentation and reasoning. This includes all the materials used during the research procedure.
- The *kaarya Yoni* (The source of the problem) - The material or the essential cause of the problem which has transformed into a subject of Research/Investigation. This involves the search of the source of the problem as the source gives the clue to the approach towards the solution of the problem.
- The *kaarya* (The manifestation/ transformation desired) - The aim and objective which are to be achieved by the research scholar. The solution for which the research has been undertaken.
- The *Kaarya phala* (The immediate result)- The immediate result and the effect produced by the Research activity.
- The *Anubandha* (The contribution/ long time accomplishments) - The contribution that is bound to be associated with the research scholar in the positive or negative ways.
- The *Desha* (The Research Site/Place) - This concern with the area or the site of Research undertaken considering its pros and cons.
- The *Kaala* (Time/Duration of Research) - The time is an unavoidable factor in all the activities undertaken. The stipulated period of Research with its relation to the time is the importance of *kala*.
- The *Pravritti* (Initiation/Effort)- The research scholar has to have the will or the desire to undertake the initiation or effort for his research project.
- The *Upaaya* (Method/Plan) - The best research plan that brings about the excellence in the scholar and tools or the means. This involves the optimum utilization of the funds and the resources.

These above mentioned ten essentials for the pursuance of any research work decide the result or due course of action for the rectification of any shortcomings.

The Fundamental Research in Ayurveda:

Catering to the demands of the society and the medical fraternity, the modern scientific research has been initiated in *Ayurveda* in the field of basic principles. The aim of basic research in *Ayurveda* is to explore the scientific innovations and opportunities in fundamental notions of *Ayurveda*. The fundamental Research includes the replacement of faith and suppositions with the scientific reasoning complimented with the facts and figures. The objects of the investigation in the Fundamental Research are categorised into four broad categories viz. The Man/Human Body (*Purusha*), The Disease (*Vyadhi*), The Medicine (*Aushadha*) and the Right time for action (*Kriyakaala*) (*Sushrut Samhita sootra sthana chapter 1 verse 38*).

The substratum of the health and the disease i.e. the human body is the first object of the research in myriad forms as it represents the microcosm which is the part of the gross macrocosm (Universe). The *Ayurveda* being a holistic system of medicine approves the principle of the harmony of the microcosm and the macrocosm known as the '*lok- purusha saamyā*' (*Charaka Samhita Shaarira sthana chapter 5 verse - 3*) in the *Ayurveda* parlance. This can be equated with the ecological balance essential for the harmony between the man and the environment. The study of the human body involves the study of the basic sciences as the body is formed by the combination of the soul which bestows consciousness and the five basic elements known as the '*Panchamahaabhoota*' in the *Ayurvedic* terminology (*Sushruta Samhita sootra sthana chapter 1 verse 22*). These five basic elements are the Ether, Air, Fire, Water and the Earth termed as the *Aakaasha, Vaayu, Agni, Jala and Prithvi* in *Ayurveda* respectively. The basic unit of the atom is said to be formed of these five basic elements. Therefore, the body which is gross product of the various combinations of these elements expects the research on these parameters that is possible with the basic sciences. The various aspects of the research of the human body and its close associate of the environment are –

The Anatomical/Structural Units- This includes the research on the number of the anatomical entities in body with the detailed positions and specifications. The *Ayurvedic* entities of the vital parts i.e. the *Marma* have to be investigated as to their relation to the nervous system mainly the plexus.

The Physiological Units- The *Ayurvedic* physiology has the unique and independent approach aloof of the modern concepts as the *Ayurveda* physiology is mainly the study of the *Agni*, the factor of transformation. Also, the three primary factors of the *dosha* which is the cause of disease in the imbalanced state, the tissues, *dhaatus* which maintain and bear the body and the by - products of metabolism expected to be expelled known as the *Mala*. As these three are not perceptible directly and are inferred through their activity, they have to be researched in the modern light and their contemporary entities have to be discovered. Similarly, the hormones and the enzymes have to be understood in the *Ayurvedic* parlance so that the diseases of their imbalance can be dealt with.

The Environmental Systems – As the human body is in harmony with the nature, the variations in the environment affect the human in some or the other way. The recent world wide concern over the climate change with its implications on the very existence of the bio diversity highlights the significance of the environment and their various ecosystems. The circadian rhythm has been explained in *Ayurveda* along with the impact of the seasonal variations in the biological parameters and the method to check or minimize the hazardous effects. This relationship between the human physiology and the climatic variations has to be studied in the modern light so that the essence of the *Ayurveda* reaches to its potential.

After the human body, it is the disease which has to be investigated thoroughly. The diseases erstwhile absent and therefore not mentioned in *Ayurveda* but are posing a great challenge today need to

be understood through the *Ayurvedic* principles of pathology and then the medicine for them has to be investigated. The diseases like the 'Ebola' pose a continuous threat to the humanity with no remedy insight that eats into the major chunks of the resources intended for the welfare of the human race. *Ayurveda* in a scientific light can be a possible remedy or at least mitigate the dependence of the ever increasing resistance to the deadly antibiotics.

The medicine in *Ayurveda* has to be researched in such a way that its pharmacodynamics and the pharmacokinetics are clear along with the safety and potential unwarranted effects if any. The preparation and the subsequent use of the mineral preparations have to be under strict guidance and vigil as they are the most potent in action and reactions. The various pharmaceutical procedures are to be standardized which is the first step towards the quality control and safety.

Then, the last object of investigation under the umbrella of the fundamental research is the unique concept of the 'Appropriate time of the treatment' called as the *kriyakaala*. This is important in the sense that stages related to the disease define the method of their remedy.

Conclusion

The article brings to light the glorious past, challenging present and the bright future prospects of Research in *Ayurveda* with special reference to the fundamental or basic principles. The Research has been integral part of this traditional but perpetual science that has kept it alive and it is the time that *Ayurveda* establishes its scientific base through the research in the basic principles which will ensure *Ayurveda* gain a place of pride in the galaxy of the contemporary sciences.

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