

**NEED OF PROPER ANUSANDHAN PADHADATI (RESEARCH METHODOLOGY) AND STUDY DESIGN IN AYURVEDA**Dr. Somya O. Singh<sup>\*1</sup>, Dr. Indrajeet Gadge<sup>2</sup><sup>1</sup>Assistant Professor, Department of *Rachna-Sharir*, Sidhhakala Ayurveda Mahavidyalaya, Pimparane Road, Sangamner, Maharashtra -422605.<sup>2</sup>Assistant Professor, Kaumarbhrutya Department, Sidhhakala Ayurvedic College, Pimparane road, Sangamner, Maharashtra -422605.**\*Corresponding Author: Dr. Somya O. Singh**Assistant Professor, Department of *Rachna-Sharir*, Sidhhakala Ayurveda Mahavidyalaya, Pimparane Road, Sangamner, Maharashtra -422605.

Article Received on 17/07/2023

Article Revised on 07/08/2023

Article Accepted on 27/08/2023

**ABSTRACT**

Discovery, Invention and Innovation are different from the word Ideal Research. Discoveries can be accidental; Inventions are the result of purpose and need of Innovations arise out of need of development and Technology. All these three are synonyms to Research or a part of Research. Ideally, The Research should be constructed in a manner that allows others to repeat the experiment and obtain similar results.<sup>[1]</sup> The need of Research in Ayurveda is a demand in current scenario since Ayurveda is lacking in growth and world-wide recognition. Some of the reasons being that knowledge to a greater extent, preserved by oral traditions has been lost with passage of time. There are a smaller number of Analytical validations and Experimental validations. Least number of Annotations of Ayurvedic Samhitas due to socio-economic reasons and the pattern of teaching method in Ayurveda has never changed from last 50 years. Also, the modern frame work or study design is totally inappropriate to carry out an Ayurveda Research. We need to develop our own parameters, basics and scientific tools outside the influence of modern science. Hence proper '*Anusandhan paddhati*' which includes maximum Practice based clinical trials should be adopted and the protocol for conducting an Ayurvedic research work should be based on '*Panchavayava Vakya*'.<sup>[2]</sup>

**KEYWORDS:** *Anusandhan Padhadati, Panchavayava Vakya, Research.***INTRODUCTION****Need of Research in Ayurveda arises due to following drawbacks and flaws**

Knowledge to a greater extent, preserved by oral traditions has been lost with passage of time, since maximum studies and research works are based on

- Observations.
- *Aptopdeshas* and
- *Darshana* (Philosophy).

Less number of proofs are available; since smaller number of analytical and experimental validations are done. From the last 2000 years very less conceptual development in Ayurveda is evident, whatever has been added is less explained or obscure. Also due to socio-economic factors Annotation (*Pratisanskaran*) of Ayurvedic Samhitas could not be done in last 2000 years which lead to loss of original data related to Samhitas.<sup>[3]</sup> Pattern of teaching method in Ayurveda has never changed from last 50 years nor any new research work is added. Our text, concept and line of treatment is too difficult to explain to a lay man. Parameters, basics and scientific tool required for research work is influenced by

modern science. Research work is less emphasized on Fundamental principles and diagnostic tools as compared to drugs. There is a need of Diagnostic tools in research for Ayurveda. Ayurveda research protocol lacks Standard *Anusandhan padhadati* (Research methodology) and study design which is outside the influence of modern science protocol.<sup>[4]</sup>

**DISCUSSION****History of Research in Modern Medicine**

The current state of demand of modern medicine concludes the rate of progress this science has made as compared to other field of medicine especially other traditional medicines.<sup>[5]</sup> Some of the two main reasons being;

- It explains the cause-and-effect relationship between the disease and treatment.
- Maximum Conventional Evidence medicine clinical trials.

With the introduction of early Anti-biotics in 1930's its growth was at peak. Later these medicines started showing up resistance, since it did not treat the cause of

the disease but only its symptoms. It suppressed the real cause which came up, erratically causing the re-occurrence of disease. As William Osler (1849-1919), Father of modern medicine once said, 'One of the first duties of the physician is to educate the masses not to take medicine' does not mean one should not prescribe any medicines but one should be able to treat a patient with least number of medicines. To conclude modern medicine is used to treat the disease rather than the patient.<sup>[6]</sup> When two different patients with identical disease condition given the exactly same medicine but the effects do not seem to be similar, is because almost all diseases are both psychosomatic in condition. This concludes that every patient needs special attention what so ever. Hence according to Ayurveda, it is necessary to follow *Pratipurush Niyat Chikitsa* (Individualistic treatment) that is consider the *Prakruti, Dosha* etc. of the individual as well of the diseases. This concludes that modern research protocol is not fit for carrying out Ayurvedic Research.<sup>[7]</sup>

### Conventional Clinical Trial (Evidence-based medicine) Regimen not fit for Ayurveda

With the demand of Research in Ayurveda W.H.O made an attempt in 2004 for a separate body for Research methodology in Ayurveda and Traditional medicines. W.H.O strongly recommended an exhaustive training of manpower of Ayurvedic institution for research methodology. But the government of India could not invest in the area, leading to production of non-qualified researches in Ayurvedic institution who are supposed to be the back bone of Ayurvedic Researches. Conventional clinical trial regimen is not fit for Ayurveda, in place of Conventional Evidence-based medicine (EBM) clinical trials, Practice based clinical trials should be organized by Ayurveda. Also, EBM approach in Ayurvedic drug research limits the consideration of

- *Prakruti,*
- *Dosha- Anubhand and Anubandhyatwa,*
- *Arambhak and Anugami Dosha,*
- *Vikalpa samprapti,*
- *Vikruti Visham samwet,*
- *Prakruti and Awaran janya prakop,*
- *Aam awastha Pakwa awastha.*

All these factors lead to variation of Drug Dose, Drug Dosage form, *Aushadhi kaal, Anupan, Sahapan, Pathya-Apathya.*<sup>[8]</sup>

### Practice based Clinical Trials

The conventional approach for clinical trial initially includes Laboratory activity followed by In-vitro and In-vivo Trials, once the drug safety is assured, it is led by clinical trials on Humans for evidence for efficacy, after which the new drug is approved for clinical use. Where as in Traditional practices, clinical experience ensured safety confirmed therapeutic leads to possible mechanisms like In-vitro, In-vivo, mechanism based screening and detailed clinical assessment of the drug, after which the drug is put up for global use. This whole

procedure is known as Reverse pharmacology or Practice based Clinical Trails which should be widely practiced in Ayurveda for its growth in Research.<sup>[9]</sup>

### Fields of Research in Ayurveda that needs to be focused on

The purpose of Ayurveda is to protect the health of the healthy and alleviate disorders of the diseased. Research in Ayurveda firstly requires to validate its Fundamental principles and Diagnostic principles in place Drugs, so that any clinical research carried in Ayurveda is purely based on its own principles and diagnostic tools rather than being influenced by modern science. Need of research in diagnostic tools in Ayurveda should include research in the following:<sup>[10]</sup>

- *Nadi- Pariksha* (How to locate meridian pulses).
- *Jiwah-Praiksha* (*Vataj, Pittaj* and *Kafaj* Tongue, Ayurveda Tongue reflex, Ayurveda Tongue Diagnosis).
- *Mukha Praiksha* (Ayurvedic Facial Diagnosis).
- Remaining *Ashta-Vidha Praiksha* (*Shabda, Netra, Mutra, Mala*).
- *Anguli Pramana / Anthropometry.* (Normal Circumference, length, breadth and arc of a healthy and diseased individual).

All these Diagnostic tools should be brought in use in place of Pulse, Tongue, Stool, Urine examination, BMI, Waist to hip Ratio Skin thickness test etc. all others influenced by modern science. Ayurveda requires research in these areas of diagnostic principles of Ayurveda so that the Ayurvedic Diagnosis can be made pin-pointed to more effective treatment strategies.<sup>[11]</sup>

### OBSERVATIONS AND CONCLUSION

#### Study design in Ayurveda

Study design is a specific plan or protocol for conducting the study. The purpose of study design is to allows the investigator to translate the conceptual hypothesis into an operational one. Ayurveda should have has its own study design and *Anusandhan padhati* (Research methodology) against the influence of modern research design and protocol which includes the following:<sup>[11]</sup>

#### 1. *Pratignya* (Hypothesis)

*Pratignya namo Sadhya Vachanam*, means a statement of research problem or assertion about the object to be proved.

#### 2. *Hetu* (Plan of work/ Collection of Data)

'*Hetur namo uplabdhi Karanam*', means available data for the research work which are derived from the following *Pramanas* (principles) that is

- *Aptopesha,*
- *Pratyaksha,*
- *Anuman,*
- *Upmana,*
- *Yukti.*

#### 3. *Udharan* (Example or Having a proved theory)

#### 4. *Upnaya* (Acceptance of Hypothesis)

#### 5. *Nigamana* (Establishment of Principles)

Excellent example of highly developed Research Methodology in Ayurveda includes *Nidan Panchak*, *Shatkriyakala* and *Janopdhwansa*.<sup>[12]</sup>

### Other factors to promote Advance in Research of Ayurveda

Writing and rewriting the Samhitas and original texts can prevent its vanishing. Also, commentary on the original texts has become necessary to make it available in many languages ones which can be easily understandable. Diagnosis and treatment in our studies should be based on;<sup>[13]</sup>

- *Panchmahabhuta*
- *Tridosha*
- *Prakruti*

These three factors should be implemented in a modern way. Our clinical Studies hardly focus on preventive measurements such as use of *Pathya-Apathya* according to *Prakruti*, *Satva*, *Agni* and *Dosha* of the disease and the Patient. Our studies should include meditation, Yoga, Physical cleansing to improve the psychological action of a drug and also in psychological disturbances.<sup>[14]</sup> Confirmation of Controversial Drugs such as *Punarnava*, *Jivanti*, *Sankhpushpi* etc should be confirmed and invention of means to detect the *Rasa*, *Virya*, *Vipaka* of a drug should be done. Standardization of Polyherbal and Herbo-mineral Drugs etc. are the least possible and important factors the field of research in Ayurveda needs to work on, until the modern science utilizes our means of study for their research only then can we say we have achieved success.<sup>[15]</sup>

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