

## RESEARCH METHODOLOGY IN AYURVEDA

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Article Received on 24/03/2024

Article Revised on 14/04/2024

Article Accepted on 04/05/2024

## ABSTRACT

Research is the quest for knowledge through intensive search or investigation aimed at discovery and inter relation of new knowledge according to WHO. Research done for establishing new facts, discarding the old facts or correcting and modifying them. Maintenance of health and treatment of disease is the main objective of *Ayurveda*. *Ayurveda* classic also give importance to research. Those alone are wise who act after examination. Through various principles, practices and procedures were mentioned. They can be used to eradication of various diseases. To search *Nidana* with *Ayurvedic* perspective for various diseases.<sup>[1]</sup> The research in *Ayurveda* aimed to develop a scientific view of concepts and theories laid down in the classics with the necessary amendments made wherever desired keeping the basic principles intact. There is huge scope of research in *Ayurveda* from the point of each factor mentioned.

**KEYWORDS:** *Ayurveda*, Research and Methodology.

## INTRODUCTION

Research is a systematic investigation to gain knowledge about phenomenon and problem. Necessity is the mother of invention. This quest of search something new or reinvent the known that is for the betterment of mankind is termed as Research. The research is not new for *Ayurveda* but stressed on constant need for research in every aspect of medical science. *Ayurvedic* Principles are very constant because they explain only truth. Research is done for discarding old facts and establishing new facts, correcting and modifying them. Many times Research is also done to validate old principle with fresh proofs.<sup>[2]</sup>

For carrying out any research, there should be some steps or procedure by which a hypothesis is studied. Such systematic procedure is called Methodology, *Ayurveda* has its own research Methodology, *Panchaavyava Vakya* consists of *Pratigya*, *Hetu*, *Udahrana*, *Upanaya* and *Nigaman* which respectively means the hypothesis, supportive theory or Experiment, example having same phenomenon proved, acceptance of hypothesis and establishment of a principles. Similarly many concepts like *Nidana Panchaka*, *Shat Kriya Kala*, *Janapadodwansaniya* etc, are nothing but the excellent example of highly developed research methodology in *Ayurveda*.

Serial no.	<i>Panchaavyava</i>	Used as Research tools
1.	<i>Pratigya</i>	Hypothesis or Title of thesis
2.	<i>Hetu</i>	Research method, technique, Lab tools, Protocol
3.	<i>Udahrana</i>	Previous Research work, Thesis on same topic
4.	<i>Upanaya</i>	Conclusion and Discussion
5.	<i>Nigamana</i>	Revalidation of the Hypothesis

**AIM**

- To know the importance of Research in *Ayurvedic* classical text.
- To describe Research in various aspect of *Ayurveda*.
- To explore the purpose of research in *Ayurveda*.

**OBJECTIVE**

- *Ayurveda* is gaining Global acceptance, interest in *Ayurveda* and its public demand is rapidly increasing. Such demand only fulfilled by Developing an appropriate Research Methodology.
- The current Methodology of Research being applied in *Ayurveda* should be analysed critically.
- Explain about the understanding of fundamental Principles.

**MATERIAL AND METHOD**

*Ayurveda* classics also give importance to research. “परीक्ष्यकारिणो हि कुशला भवन्ति” Those alone are wise who act after examination.<sup>[3]</sup> Proper research divided into two categories- true and untrue. These can be examined by four methods i.e *Aptopdesha*, *Pratyaksha*, *Anumana* and *Yukti*. *Ayurvedic* principles are constant because they explain only truth. These four *Parmana* determine the truth according to *Ayurveda*.

➤ **These four *Parmana* and their clinical significance**

**1. *Aptopdesha***

*Ayurvedic* concepts are evidence based including scriptural evidence and can be described as authoritative statement by ancient philosopher. One should acquire knowledge systematically through *Aptopdesha* followed by *Pratyaksha* and *Anumana*.

Every disease should be studied carefully, with the help of the texts from the standpoint of- *Prakopana-hetu* (etiological factors of the disease), *vedana*-types of pain, *Sansthan*-symptoms, *Yoga*-Concomitants/prescribed medicine.<sup>[4]</sup>

**2. *Pratyaksha***

*Pratyaksha* is Perception of direct observation and examination of any disease by own sense organs (*Indriyas*) except gustatory organ.

By auscultation physician hear the various sounds through ears. e.g In *Antrakujana*- gurgling sound from intestine.

By percussion Physician use both the Palm. e.g on Percussion of the abdomen if tympanic note is heard then it could be gas in intestine and if Dull note heard collection of fluid in abdominal cavity.<sup>[5]</sup>

Like these another examination done Visual inspection through eyes, Palpation through touch the body of patient and abnormal smell through olfactory sense organ.

For the conduction of any research one has to collect the Data and then after its analysis final conclusion is drawn. Collection of Data usually depend upon *Pratyaksha Parmana* only.

**3. *Anumana***

Inference is knowledge gain by reason and logic. *Anumana Parmana* has got a significant role as a diagnostic tool in medical science.

E.g. *Agni* (digestive fire) physician observe by power of digestion.

Vitiation of *Doshas* from the quantity of provoking factors.

Approaching death from prognostic sign.<sup>[6]</sup>

**4. *Yukti***

*Yukti* is knowledge gain by ingenuity. It means apply the aids, tools or machines for various experiments or treatments. According to *Acharya Charaka*, this is important factor for planning of treatment.

The knowledge of *Hetu*, *Doshas* vitiated, *srotas* involved, type of *sroto dusti*, stage of disease manifestation etc will help the physician to decide the treatment modalities.<sup>[7]</sup>

➤ ***Tantrayukti* in Research**

A careful analysis of *Ayurveda* treatises reveals that there is a comprehensive approach regarding research. To study a science to interpret its correct unambiguous meaning for practical application. There is a systematic approach, technique and methodology is called *Tantrayukti*. The no. varies from 32 to 36 respectively.

Along with this it is observed that most of the *Tantrayukti* have striking similarities with the term of research methodology. The ancient concept of critical analysis and means of understanding or interpreting science which can be compared as the various components of research methodology.

Sr. no. <i>Tantrayukti</i> Research terminology
1 <i>Adhikaran</i> Research area/topic (Subject matter)
2 <i>Yoga</i> (Proper arrangement) Scientific writing
3 <i>Hetwartha</i> (Extension of arguments) Reference
4 <i>Uddesha</i> (Concise statement) Abstract
5 <i>Nirdesha</i> (Descriptive statement) Whole article
6 <i>Pradesha</i> (Partial enunciation) Sampling
7 <i>Pradesha</i> (Determination of present from past) Retrospective study

8	<i>Prayojana</i> (Purpose) Aims and Objectives
9	<i>Upadesha</i> (Authoritative instructions) Research guidelines
10	<i>Apadesha</i> (Reasoning a statement) Discussion
11	<i>Atidesha</i> (Determination of future event) Hypothesis
12	<i>Arthapatti</i> (Implication) Discussion
14	<i>Prasanga</i> (Repetitive) –
15	<i>Purvapaksha</i> (Question with objection) Research question
16	<i>Nirnaya</i> (Final decision) Conclusion/result
17	<i>Ekanta</i> (Categorical statement) Conclusion
18	<i>Viparyaya</i> (Inferring the opposite) Opposite Implication
19	<i>Apavarga</i> (Exception) Exclusion criteria
20	<i>Vidhana</i> (Order of sequence) Writing methodology
21	<i>Anumata</i> (Confession) Informed consent
22	<i>Vyakhyan</i> (Detail explanation) Review of literature
23	<i>Samshaya</i> (Doubt/Contrary) Bias
24	<i>Atitavekshana</i> (Retrospective reference) Referencing
25	<i>Uhya</i> (Logic/deduction) Discussion
26	<i>Samucchaya</i> (Grouping) Data collection
27	<i>Pratyutsara</i> (Refuting other's view) Discussion
28	<i>Uddhara</i> (Establishing own view) Discussion
29	<i>Sambhava</i> (Possibility) Probability
30	<i>Sanniyoga</i> (Dictate) Positive correlation/inference

#### ➤ **Roga Nidana in Research**

*Ayurveda* is science of life hence concerned with prevention and cure of disease. Since *Nidanaparivarjana* is the first step of prevention. The study of *Nidana* (causative factor) should be accurate. Therefore it is necessary to prove etiological factor of various new diseases as compared to *Nidana* told in *Ayurveda*.

Before providing treatment for any disease diagnosis of case based on *Ayurvedic* parameter is essential. If we have proper knowledge regarding the pathogenesis of disease then we can easily treat the disease.

#### ➤ **Dravya Guna Vijnana in Research**

*Ayurveda* described pharmacological action of *Dravya* like *Rasa, guna, virya, vipaka* and *prbhava* which work towards therapeutic action of drugs. *Ayurveda* concepts of *Dravya Guna Vijnana* deals with the general principles related to the *Ayurveda* Pharmacology.

The science specially deals with Pharmacognosy Pharmacology and therapeutic utility and relation between action and properties of *Ayurvedic* Drugs. Various research is done in the field of pharmaceutical field Drug research, experimental research, therapeutic research.

Scientific information of herb and their proper identification, nature, nomenclature and pharmacological action of drug in *Dravya Guna Vijnana*.

#### ➤ **Vadamargapada in Research**

While the physicians debate with each other certain terms may be useful to them to determine the path of Debate, these terms are known as *Vadamargapadas*.

*Vadamargapadas* are one of the most ignored aspects of *Ayurveda* if they are applied properly they certainly prove to be essential like learning, research etc. So it's need of time to understand them in proper way for getting benefited of their multidimensional applicability.

*Vada* (Debate) also help to establish the new creature idea or research work. Here the *Marga* denotes way or methodology. Thus *Vadamarga* may utilize as research methodology.

For validation of research work in providing hypothesis/null hypothesis following *Vada Marga* are utilised. These terms are 44 in number.

1. *Vada*- Debate in hostile or Academic discussion with an opponent.
2. *Dravya*- Substance.
3. *Guna*-Physical properties/Attributes.
4. *Karma*-Action.
5. *Samanya*-Similarity.
6. *Vishesha*-Dissimilarity.
7. *Samvaya*-Inherence.
8. *Pratigya*-Proposition/Statement.
9. *Sthapna*- Establishment.
10. *Prtisthapna*- Counter establishment.
11. *Hetu*- Cause.
12. *Drishtant*- Example.
13. *Upanya*- Correlation.
14. *Nigaman*- Conclusion.
15. *Uttara*- Rejoinder.
16. *Siddhanata*- Concepts.
17. *Shabda*-Word.
18. *Pratyaksha*- Direct observation.
19. *Anumana*- Inference.
20. *Atihaya*- Traditional Authoritative instruction.
21. *Aoupmay* - Analogy.
22. *Samshya* - Doubt/indecision.

23. *Pryojana* - Object, initiate for a temporary reason.
24. *Svyabhichara* - Uncertain statements.
25. *Jigyasa* - Inquiry/curiosity.
26. *Vyvsaya* -Determination.
27. *Arthpraptti* - Acquisition of implied sense.
28. *Sambhava* - source of origin.
29. *Anuyojya* -Questionable statements.
30. *Ananuyojya* -Unquestionable statements.
31. *Anuyoga* -Direct question.
32. *Prtyanuyoga* -Counter Question.
33. *Vakyadosha* -Syntactical defect.
34. *Vakyaprshamsha* -Syntactical excellence.
35. *Chala* -Unprinciped,untrust worthy froud.
36. *Ahetu* -Fallacious reason.
37. *Atita kala* - Delayed temporal order.
38. *Upalambha*-Pointing out defect in causality.
39. *Parihar*- Correction or removal of faults or defects.
40. *Prtiyahaani* - Loss of proposition.
41. *Abhaynugya*-Admission of Arguments.
42. *Hetvaanter*-Imperfect reason.
43. *Arthaanter*-Irrelevant statement.
44. *Nigrah Sthan*- Reason for defeat.

#### ➤ **DISCUSSION AND CONCLUSION**

There is a lot of scope of research in *Ayurveda* including the fundamental, literary, Experimental and therapeutics. Keeping the *Ayurveda* fundamentals intact, it is mandatory and obligatory to pursue scientific research in this probably the oldest system of medicine still practiced and followed by millions across the globe.

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