

## SIGNIFICANCE OF RESEARCH METHODOLOGY IN AYURVEDIC UNDERGRADUATE ACADEMIC CURRICULUM

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### ABSTRACT

Common sense, it has been said, is the most uncommon thing in the world, the combination of experience with intelligence and a lot of what we do in our daily lives is also based on common sense. But sometimes this common sense may not be the best approach and at times there may be contradictory notions that what is best or what works in one situation may prove futile or even dangerous in another. Even in the domain of health care there are gaps in knowledge, theories about how something might work better or not and ideas for improvement and when it comes to medicine we are dealing with

human beings and no two humans are similar. The effects of our interventions are variable. As healthcare professionals cannot afford to take risks research is needed. This type of exact literature pertaining only to research methods and statistics was not evident in *Ayurvedic* texts. Rather whatever is found scattered in *Charaka Samhita* the oldest document is not found with the same or more rigor in later Samhitas like *Sushruta Samhita* and *Ashtanga hridaya*. Research helps us create new knowledge and develop proper tools for the use of existing knowledge. Not only does it enable health care providers to diagnose and treat diseases, research also provides evidence for policies and decisions on health and development. So, Research methodology is one of prerequisites to bring out fine and fruitful work. The present study reviews the significance of Research Methodology in Ayurvedic Under graduate Academic curriculum.

**KEYWORDS:** Research, Methodology, *Ayurvedic*, Curriculum.

## INTRODUCTION

Research Methodology the study of conducting research; is composed of two words Research and Methodology. Two syllables 'Re' and 'search' make up the word research. Re is a prefix which means again and over again and the latter word search means 'to go around' or 'to wander'.<sup>[1]</sup> The underlying metaphor is not a straight ahead move to some mysterious target but instead a cognitive or intellectual working, an exploration, a hunt for knowledge, a voyage of discovery, a methodical and logical search for getting relevant answer on any taken up specific matter or issue. Research has been a basic attitude of human behavior and probably of all living organisms. This aids to establish new facts and reach new conclusions so it shapes people's understanding of the world around them. Today the facts established by proofs derived after careful investigations, observations and experiments and supported by accurate data and convincing reasoning can only convince the people about validity or otherwise of any statement. Facts are required to be supported by figures and that figures can emerge out only through research.<sup>[2]</sup> Methodology is a set of body or principles, procedures, rules and practices applied to a field of study or a particular branch of knowledge. Thus, Research Methodology is a way to find out the result of a given problem on a specific subject also referred to as research problem. It covers topics in every field of science and perceptions of its scope and activities are unlimited. Different sources use different type of methods for solving the problem.

These research studies have been classified depending upon the extent to which they satisfy the requirements of a scientific procedure or based on the purpose for which it is undertaken. The research activities are broadly classified into two groups.<sup>[3]</sup>

- Academic research
- Applied research.

The academic research mainly concerns with the basic laws of science .It gives a sound footing to probe into applied research. It is usually considered to involve a search for knowledge without a defined goal of utility or specific purpose.

Applied research is problem oriented and is directed towards the solution of an existing problem. Research involving the standardization of *Ayurvedic* medicine by using present knowledge of analytical chemistry or establishing the efficacy of medicine by pharmacological or clinical studies would fall in this category.<sup>[4]</sup>

In ancient times in which *Ayurveda* is rooted, the scientific approach of knowledge was deeply respected and practiced in the form of numerous discussions amongst the masters of the science and they are mentioned in the traditional literature. Even indications for research adapted to *Ayurveda* are mentioned, but they are slightly out-dated. *Pancha anumana vakya* consisting of *Pratigya*, *Hetu*, *Udaharan*, *Upanaya* and *Nigamana* which respectively means the hypothesis, supportive theory or experiment, example having same phenomenon proved, acceptance of hypothesis and establishment of a principles.<sup>[5]</sup> Similarly many concepts like *Nidanapanchaka*, *Shat kriyakala*, *Janapadodwansaniya* etc. are nothing but the excellent examples of highly developed research methodology in *Ayurveda*.<sup>[6]</sup> So, *Ayurveda* has never denied the need of research in its advancement. The huge and well preserved but far not mastered traditional literature represents the cornerstone for successful fundamental research in India. Fundamental research has to be done in the fields of *Ayurvedic* pathology, pharmacology/*Dravya Guna* (fundamental and clinical), pharmaceuticals (including knowledge about the right land for cultivation, the right place and conditions for collection and storage of plants), etc. Given the modern scientific standards being the reference for the global scientific community, it is necessary to take at least some of their aspects in account while defining new criteria for research. Unlike in India and some other Asian countries, evidence for the validity of *Ayurvedic* concepts have first to be proved on an international level.

### Significance

The CCIM of India oversees the quality control of both undergraduate and post graduate *Ayurvedic* medical curricula. According to the old guidelines of CCIM India, Research methodology was not included as part of the medical curriculum, Research Methodology and Statistics were only a part of post graduate curriculum.<sup>[7]</sup> but according to the revised guidelines framed by CCIM; Research methodology and Statistics have been introduced in the 4<sup>th</sup> professional year of under graduation training. This is a very welcoming step as the curriculum needed to be reviewed and restructured. The syllabi required to have been updated with certain relevant topics like Research methodology as the *Ayurvedic* academicians are required to be trained in standard methods of research and documentation skills.<sup>[8]</sup> The most important reason for teaching specific topics to medical students is the relevance of such topics. The use of real examples and an emphasis on the need for evidence have meant that *Ayurvedic* medical students are fully aware of the pressure experienced by clinicians to

justify their decisions and need to be able to understand and critically appraise medical research.

In clinical years, of post-graduation such courses were presented in 1<sup>st</sup> year or semester when the medical students exist in a vacuum of medical knowledge but now an early introduction in undergraduate course can prove to be a successful and a reinforced course during the latter studies as that jargon of Research Methodology is familiar. The lecturing of service course lie must not in the hands of non-expert lecturers which can result in teacher who is in a ‘medical vacuum’ teaching students in a medical vacuum. Students consequently merely try to pass a course for which they see no purpose in the medical profession. Also there was a false perception among the students regarding research that it is only suitable for those having an academic career as it may isolate them from patients and clinical practice.<sup>[9,10]</sup> so the lectures should consequently also possess knowledge of insight into medical literature.

It has been observed that many academicians do not follow international standards while planning the protocols of research projects and while writing research reports and articles for journals. Science and subsequent publications form an essential part in conduction of research. The published journals articles typically have gone through a rigorous screening process known as blind peer review, whereby independent experts provide the author with critical commentary and suggestions to improve their final paper prior to publication.<sup>[11]</sup> Articles submitted to journals usually appear in print sooner than in book. Articles published in peer review journals are likely to remain a very important means of distributing research finding for the foreseeable future but the irony is due to lack of knowledge of stand research methods and due to inadequate preparation, many medical professionals on completion of their post graduate curriculum are unable to critically evaluate published research articles or properly design, execute and present their own research. It should be borne in mind that if finding of a research work is not published in medical journals, the value of that research for society, country and world remains zero. Thus, the whole effort put in planning that research activity, execution of study, data collection, data compilation, data analysis and report writing goes in vain. So Introduction of Research Methodology among students to diverse methodological issues involved in performing research would render them investigate planning, hypothesis construction and study designs. Upon doing so, students will have an understanding of research methods and will show an acceptance of responsibility to contribute to the advancement of medical science that is a research approach in practice.

Studies indicate that having a good foundation at research may help the students in pursuing their career at research.<sup>[12,13]</sup>

In several national and private systems, the professionalization of research has resulted. Even at the level of pharmacies also whatever researches are carried out, it's mandatory to be conducted through people well versed with research protocol. Furthermore, Not only students but anyone who is associated with medical field in this way or the other need to have knowledge of research. For example people who are in administration have to frame policies. Detailed and accurate information on the status of their health system may be required and Unfortunately if the information is lacking decisions are based on assumptions and unjustified conclusions and often result in inappropriate policy choices. In this regard, the search for scientific knowledge and information should be strongly supported.<sup>[14]</sup>

## DISCUSSION AND CONCLUSION

In many countries, the system for management and coordination of health research has not been established or is not functioning properly. Research is not considered a part of the medical curriculum in many of the developing countries. In many South Asian countries, research component has not been made mandatory in the medical curriculum.<sup>[15]</sup> Studies reported that some of the medical schools in India, Pakistan and Nepal also conducted research projects and community based epidemiological studies during their studentship and internship though it has not become an integral part of the medical curriculum.<sup>[16]</sup> The lack of research methodology and the absence of qualified researchers hinder many developing countries to conduct health research by themselves.<sup>[17]</sup> Unfortunately, such information is often lacking, inadequate or unreliable .As a result, decisions are based on assumptions and unjustified conclusions. If we look carefully at the *Ayurvedic* curriculum of medical education in India, there is an ample scope to strengthen knowledge and skills of medical students on Research Methodology. There are some justifiable reasons favoring the inclusion of Research Methodology in undergraduate medical curriculum viz.

- The medical graduates who prefer private practice on their own do not feel the need to do a research study since they don't have any orientation to conduct research study despite of having enough opportunity.
- Those doctors who work in hospitals don't have any inclination towards research due to lack of conducive research atmosphere at their institutes because of set priorities for patient care and administrative workload etc.

- The doctors who are interested in research activity and are employed in research institutions; due to deficiency of clarity in conducting research study in a systematic manner or a proper direction don't succeed in carrying out a research study.
- Lastly, the people who deal with research or have an access to a very good quality data sometimes fail to document it and those who are able to document their research fail to publish their work because of lack of knowledge of exact methodology.

The current methodologies of research being applied in *Ayurveda* should be analyzed critically therefore; it makes a strong sense to incorporate theoretical and practical training on Research Methodology followed by evaluation. However it is clear with the earlier discussion that inculcation of Research Methodology in *Ayurveda* is of paramount importance for all of us without any exception.

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