

## **ISSUES IN PUBLICATION OF AYURVEDIC RESEARCH WORK – NATIONAL & INTERNATIONAL SCENARIO – SHORTCOMINGS & SOLUTIONS**

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During last two decades, use of Ayurveda and other Traditional Medicines has expanded globally and gained popularity. It has not only continued to be used for primary health care of the poor people in developing countries, but has also been used in countries where conventional medicine is predominant in the national health care system. With the tremendous expansion in the use of TMs world wide especially in developed countries, safety and efficacy as well as quality control of herbal medicines and Traditional procedure – based therapies have become important concerns for both health authorities and practitioners.

Research should be a process that converts data into information, information into knowledge and knowledge into wisdom. This is like transforming milk into ghee. It should be more balanced and comprehensive. There should be equal emphasis on literary, field, experimental and clinical research. It should be able to impact the fields of education, pharmacy and practice in a profound way. Present day Ayurvedic Researches are failing in this respect as they are unable to disseminate the knowledge gained from the researches.

Any research work becomes valid and widely accepted when it is published in peer review journals. Documentation and publication of research findings is the main issue faced by Ayurveda in the global arena. There are many scattered evidences for the safety and efficacy of Ayurveda drugs lying with many practitioners and researchers and non governmental bodies. To collect and publish them is the need of time. How ever very less research works on Ayurveda are being published. To find out the reason behind this a review of the whole scenario should be done. Problems of Publication of Ayurvedic researches can be understood at four levels :

1. Level of research in Ayurveda in India and at International level
2. Status of Institutions conducting research in Ayurveda
3. Format and Protocol of Ayurvedic researches
4. Status of Ayurvedic Journals and requirement of modern scientific Journals
5. Financial support for Ayurvedic researches from different sources

### **Research initiatives in India for Ayurveda and Herbs used there in :**

- Ayurvedic Post Graduate teaching institutions private, Govt. aided and Government.
- Central Council for Research in Ayurveda & Siddha.
- Modern Research Institutions of Govt. of India like CSIR, ICMR, ICAR, CDRI, ITRC, NBRI, CIMAP etc.
- University Faculties – Dept. of Botany, Biology, Pharmacology, Medicinal Chemistry.
- Pharmaceutical companies as a part of their R & D
- NGOs like FRLHT etc

- Now the Golden Triangle project of Govt. of India

Researches done by modern scientific and medical Institutes are regularly being published in Journals like Indian drug, Planta Medica, Indian Journal of Pharmacology, Journal of Experimental Biology, Indian journal of Ethno botany etc.

### **International Research Establishments**

Following organizations in foreign countries are engaged in researches on therapeutic aspects of herbs and their extracts used in Ayurveda are being published in Western Journal occasionally.

- World Health Organization (W.H.O.)
- National Center for Complimentary and Alternative Medicine (NCCAM)
- University of Texas Center for Alternative Medicine Research.
- American Botanical Council
- At International level specially in US & UK various Universities and medical schools few scientist are conducting researches on herbs used by Ayurveda as CAM / Alternative medicine

### **Status of Ayurvedic Institutions In India**

- More than 225 Graduate colleges
- More than 60 Post Graduate level upgraded colleges
- 21 Post Graduate specialties of Ayurveda are available
- Nearly 15 universities are awarding Ph.D. degree in Ayurveda
- Yearly approximately 800 Post Graduate theses are submitted on various subjects of Ayurveda based on clinical and literary researches.
- Less than 50 PhD theses are being submitted in Ayurveda

At present nearly 800 PG theses are being submitted at various Institute and hardly 50 research papers pertaining to these researches are published. Though PG theses researches are conducted on small samples due financial restrictions and time bound nature of these studies, even then more than 20% works are worth quotable and have beautiful explanation of Ayurvedic concepts based on clinical researches.

### **Lacunas of Ayurvedic Research**

Dr (Med.) Christian Kessler – Hanover Medical School, Germany in his Article “Criteria for the Establishment of Ayurveda” states the following about Ayurvedic Researches -

- The evidence of Ayurveda is difficult to survey. There are no electronic databases for Ayurvedic studies.
- Many publications are only retrievable via hand-search of references and interviews of experts.
- In common western Databases and CAM databases only a small number of Ayurvedic studies are listed.
- Various studies are published in regional languages, many of them only as abstracts. A large number is not available at all.
- The majority of the studies belong to evidence-levels 2nd to 4th. Only very few studies from evidence-level Ia to Ib.
- There are no networks of competence or centers for excellence.
- No publication on health services research(HSR) and health technology assessment (HTA)

- Group sizes are small in Ayurvedic studies. This makes the studies vulnerable for methodological error.
- Rationale for selected study designs is not always properly described.
- Missing Values complicate the calculation of probability and power.

It is not clear, whether common instruments of statistics (e.g. RCT) can adequately analyze the multimodal approach of Ayurvedic therapies. Dr Ranjit Roy Choudhary, WHO consultant has mentioned clearly that the traditional scientific approach of modern clinical trials may not be applicable to TSMs as it is, due to various inherent problems. WHO has considered this problem and opined that Conventional concepts of clinical research design may be difficult to apply for TSMs to evaluate various systems and practices of Ayurvedic medicine, depending on the goal of the assessment. Ayurveda and other TMs involve and based on the concerned Philosophies and fundamental principles, hence any research to be called Ayurvedic research should consider and based on these fundamental principles. Hence, the choice of study design should be discussed on a case-by-case basis with experienced traditional medical practitioners.

#### **Availability of Electronic / Published Data base :**

- CCRAS Data base in Book format
- CSIR in electronic format and Book format not exhaustive and does not includes researches done at Ayurvedic Institutes due non publication of these in Scientific Journals
- TKDL ( to be released for general use) contain Literary / therapeutic knowledge of Ayurveda
- AYUSOFT – CDAC Pune (to be released for general use). This is also a Diagnostic and literary data base
- AYATA NIDANA (Diagnostic soft ware) developed by Tilaka Maharashtra Vidyapeeth, Pune in collaboration with CSIR
- AHEAD ( Wealth of Asia Not updated since 1998)
- Researches in Ayurveda- A classified directory of PG & PhD. thesis's of Ayurveda (M S Baghel- 2005) – Book form contains titles only

Many attempts have been made by CCRAS and other agencies to prepare a data base of Ayurvedic researches being conducted at Ayurvedic Institutions but could not materialize due lack of proper vision by the authorities and enthusiasm of workers.

#### **Status of Ayurvedic Periodicals and Journals**

Name of journal	Periodicity	Language	Present status	Finance
AMRA Journal	quarterly	English	discontinued	
Ancient Science of Life		English	Regular	Aryavaidya Pharmacy, Coimbatore
Aryavaidyan	quarterly	English	Regular	Arya Vaidya Shala, Kottakkal
Aushadham	monthly	multilingual	Regular	AMMOI
Ayu	quarterly	Hindi/ English	Regular	Gujarat Ayurved University, Jamnagar

Ayurmedline	half yearly	English	Irregular	Banglore
Ayurved mahasammellan Patrika	monthly	Hindi/ English	Regular	all India Ayurved congress, New Delhi
Ayurved Vikas	monthly	Hindi	Regular	Dabur Pvt. Ltd., Delhi
Ayurved Visheshajna	bimonthly	Hindi/ English	Regular	AIPG (Ayu) Association, NewDelhi
Dhanwantari	monthly	Hindi	Regular	Aligarh
Global Ayurveda	bimonthly	English	Regular	New Delhi
Journal of Ayurveda	quarterly	Hindi/ English	Irregular	NIA, Jaipur
Journal of NIMA	monthly	English	Regular	NIMA
Journal of Res & Edu in Indian medicine	monthly	English	irregular	Varanasi
Journal of Research in Ayurveda and siddha	quarterly	Hindi/ English	Regular	CCRAS, New Delhi
Nagarjun	Quarterly	English	unpublished	Calcutta
Probe	Quarterly	English	Regular	Himalaya drug Company, Bangalore
Renaissance	Quarterly	English	Regular	Nagarjuna Pharma
Sachitra Ayurved	Monthly	Hindi English	Regular	Vaidyanath Ayu. pvt. Ltd., Kolkatta
Science of Life		English	Regular	
Sudhanidhi	Monthly	Hindi	Regular	Aligarh

There are very few journals published in Ayurveda more over none of them are peer review journals hence the material published in these journals is not subjected for wide scrutiny. The journals listed in the table can be categorized in three groups on the basis of their publisher and status.

- Journals/ Periodicals published by the Ayurvedic pharmaceutical companies, they publish some short sample studies but they are not properly scrutinized. They are more interested in publishing data pertaining to their products. Much of the studies published is of the category III & IV. Sometimes experts testimonies are also published.
- Journals published by government organizations- like CCRAS, GAU, NIA etc. are always suffering from paucity of funds and mismanagement due to Red tapism. These journals are usually irregular but when they are published they contain the data of the studies conducted at their respective institutes and some others also.
- Journals published by various professional organizations like Ayurveda Mahasammelan, NIMA, A.I.Ay.P.G specialist association- usually contain the news items of their organizations and sometimes they also publish some research papers and abstract of the studies.
- Some independent NGO's have started good journals like JREIM, AMRA etc. but they are always plagued by paucity of funds hence very irregular however when published they are of a comparatively better stature.

In modern medicine and scientific Journals various studies conducted on Ayurvedic subjects are published. Studies conducted at Ayurvedic Institutes may not be properly planned, formatting of Research papers may also not up to date. However, Ayurvedic concept based studies are not fitting in the format of Journals, hence they don't publish them. Only pharmacological studies conducted on herbs are being published by Journals like Indian Drug, Indian Journal Pharmacology, Indian Journal of Ethnobotany, Journal of Experimental biology etc.

At International level very few papers related to Ayurvedic topics are published, those are also on experimental studies seldom there is publication of clinical study results. These studies do not consider Ayurvedic fundamental principles and editors of these Journals and referees of these papers have no knowledge of Ayurvedic fundamental principles hence they create goof ups like JAMA paper on heavy metals in Ayurvedic drugs, Cholesterol reducing activity of Guggulu and Teratogenic effect of Neem. Some times hostile modern medicine Industry also supports studies publication to malign the growing popularity of Ayurveda.

#### **Reasons behind the short comings of Publication of Ayurvedic Researches :**

1. Non availability of data- Some times researcher is hesitant in parting with the data. Practitioners for maintaining their confidentiality does not want to divulge their data.
2. Lack of Good Research Practices, lack of proper Clinical research protocol etc. leaves it difficult to collect credible data which is a prime requisite for publication in peer journals.
3. "Right Man Syndrome"-Quality of data asked by international journals and reputed Medical journals is often cannot be met by Ayurvedic researchers. "Even when they confront scientific evidence supporting CAM, Right Men often 'move the goalposts' of accepted scientific procedure to discredit the therapy in question. No matter how strong the evidence proves to be, more is demanded, so that the evidence is never adequate – the receding goalpost, the ever-lengthening playing field." This kind of skepticism has been termed as the Right Man Syndrome.
4. **Lack of good Ayurveda Journals** - Lack of quality journals in Ayurveda adds up to this handicap, resulting in burial of whatever data collected and compiled.
5. **Lack of command in English** - to document and publish research findings in standard Journals require presentation of material in English. In most of the states of India Ayurvedic teaching is conducted in regional languages hence Ayurvedic research scholars lack command in English language which adds to their problem in preparing research protocols and research papers.
6. Lack of Incentives and compulsions for publishing the research works – there is no provision for rewarding the good publications.

#### **Solutions for Improvement suggested by WHO :**

WHO while formulating guide lines for TMs researches, has suggested following measures for the improvement in the status TMs :

- Infrastructure for Research in TM is significantly less developed than that for conventional medicine hence for the development of TM it is important that

support should be given to the establishment of appropriate infrastructure within the academic and other Institutions of TM (Ayurveda).

- This requires funding, facilities and involvement of properly trained research personnel and Ayurvedic Practitioners.
- It will be necessary to train investigators from different Institutes to follow the same protocol and to standardize methods of patient selection different sites to follow the same protocol, and to standardize methods of patient selection, termination of patient participation, administration, data collection and evaluation.
- Appropriate consultation about the statistical analysis is necessary during the planning, execution and assessment phases to ensure methodological consistency.

Looking the lacunas and suggestions of WHO following measures can be suggested for the Improvement the status of Publication of Ayurvedic Researches.

- Training of Ayurvedic Teachers & Researchers should be given in Good Research Practices, Research protocol designing and execution. Schedule 'Y' should be designated to include Ayurvedic Research.
- Implementation WHO General guidelines for methodologies on research & evaluation of Traditional Medicine. Especially the research designs like Black Box design, Observational Designs should be adopted for Ayurvedic Research which is more suitable.
- Multidisciplinary approach for Clinical and drug Research.
- Creation of sufficient funds for Researches
- Creation & improvement of infrastructure in Ayurvedic Institutions
- Publication of monographs containing data of researches done at Various Ayurvedic Institutions.
- Publication of Literary materials
- Institution of Research awards for Ayurveda. Making compulsory for publication of at least two research papers on Ph D work before award of the degree.
- Involvement of Ayurvedic pharmaceutical companies in collection, publication & dissemination of information. Pharmaceutical companies should come forward for financing various independent researches Journal.
- Scientists from the different systems of medicine have to work together to develop a methodology of clinical research which will allow Ayurveda and other TMs to be researched within its own paradigm, which will respect the concepts and fundamental values of traditional medicine and yet will provide safety and efficacy evidence so that there is development of evidence based clinical practice. This indeed is formidable challenge ahead.
- WHO should give more attention to wards Ayurveda. Till date there is no publication from WHO is available on Ayurveda. Ayurveda being most popular and most practiced TM along with Chinese medicine still no consultant level person appointed at its regional or Central office.
- Govt of India should establish a Centralised electronic Data base for Ayurveda and other ISMs. This can be done by any premier Institution of Government with full central financing.

- Upgrading of the Journals published by CCRAS, GAU, NIA and their listing as peer Journal. for this purpose Government of India should allot separate budget and ensure their regular publication.

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