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Thought Leadership Article

Planning action for strengthening the ecosystem for Ayurvedic research



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ABSTRACT

The establishment of AYUSH independent ministry has a commitment towards strengthening the AYUSH ecosystem. Health problems involving chronic diseases, non communicable diseases etc, there is a scope for complementary as well as preferential choice of any system including Ayurveda. There are a large number of clinical setups in national/state Ayurveda institutions, but the quality publication outcome is low. In the present article, being a scientist and science manager, I have just summarized my opinion to strengthen and growth of Ayurveda. Development of special validation methods for Ayurveda research based on Ayurveda principle is an hour of need. Randomized controlled trials on the use of new innovations are needed in Ayurveda. To strengthen Ayurveda, interdisciplinary approach may prove beneficial. Value addition based synergy and partnerships with ICMR/DBT/DST/ICAR would be beneficial for the growth of Ayurveda.

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Ayurveda, an age-old established system of medicine has been a part of evolution of Indian society for over thousands of years. While revival of Indian heritage including its medical systems was part of our thought process during the freedom struggle, most of the revival history is post 1947. Creation of Department of AYUSH and now an independent Ministry reflects the political commitment. However, analysis of ground realities has to be dispassionate and thorough in order to identify/determine the real growth, barriers and to develop concrete targeted plans for bringing desired vibrancy and a desirable ecosystem for growth. Human populations all over the world including India have changed over a period. While genetic changes do not occur that fast, epigenetic influences of nutrition, physical, chemical and biological components of environment and our own microbiomes etc. are known to influence the state of health and disease. This means, that factors for health and disease need to be looked at from today's context. Preventive and intervention tools and strategies need contemporary evidence/experience, based on which, we can develop guidelines and confidently recommend the same for clinical and public health interventions.

Firstly, one of the important ingredients of a good eco-system is properly defining goals and positioning them according to felt needs expressed by end users and/or determined by experts.

Generating knowledge/developing products according to felt needs brings limelight, hope and confidence. Chronic diseases, especially Non-communicable diseases (NCDs) including cancers, stroke, dementia/Alzheimer's, cardiovascular diseases, metabolic conditions like diabetes, polycystic ovarian syndrome (PCOS), mental health, musculoskeletal disorders, reproductive health, skin disorders, chronic kidney failure, autoimmune diseases and hormonal disorders appear to be productive areas for research cum action in Ayurveda as in these areas, Allopathy, the main competitor has known limitations in many aspects belonging to these chronic health problems. Vector borne diseases, viral diseases and nutrition could be others.

It is also recognized that no system of medicine including modern medicine will be 100% effective for some health problems. Thus, there is a scope for complementarity as well as preferential choice of any system including Ayurveda in a given disease. While a huge number of publications have appeared on complementarity of Allopathy and Acupuncture, some on Yoga and Allopathy, such studies on Ayurveda as a primary/complementary strategy are extremely limited. Need for such complementarity is apparent in cancer, diabetes, hypertension and several conditions listed in this paragraph. Co-location may be important from logistic angle; however, this does not bring the benefits of complementarity as we do not know what and where to recommend.

There are a large number of clinical sets ups in national/state Ayurveda institutions, CCRAS institutes/centres/units as well as the non-governmental sector; however, data are not getting translated

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into good publications with sufficient numbers. Users, critics and policy makers will like to know the efficacy/safety of a particular intervention in Ayurveda or any other type of medical system. Such publications will be very helpful in recommending use of Ayurveda either alone or as complementary approach both for clinical and public health use. There are only few Randomized Controlled Trials (RCTs) on use of new innovations in Ayurveda. While these aspects have been debated earlier, very limited action is visible.

Secondly, many thought leaders interested in promotion of Ayurveda opine that the research should be focused on developing special validation methods for Ayurveda research based on the principles of Ayurveda by taking into consideration the holistic approach and not thinking about drug development alone. On the other hand, quality assurance and production of known drugs in sufficient quantities for use as well as developing new drugs based on knowledge of Ayurveda remains as important as advancing the knowledge regarding its applications.

Thirdly, we need sufficient physical infrastructure and human resource for research. Today, we have dedicated research centres/units under CCRAS, national institutes under Ministry of AYUSH and some good state colleges and universities. However, keeping in view the aspirations of people, scientific, administrative and political leadership, this infrastructure and human resource is too small. Monetary investment support is also too small. As a result, efforts have become too diffuse and virtually little impact is visible. It is easy to recommend expansion than actually getting it. Prioritization of programmes is thus essential. For developing robust and productive research programmes, it will be important to develop impact making programmes using the currently available infrastructure and human resource. Eco-system will gain tremendous strength by developing and strengthening networks among CCRAS institutions, other National/State Ayurvedic institutions, institutions/Centres of Excellence in Allopathy and other systems, Universities/Departments as well as Central and State medical institutions. Financial support can be harnessed from other science agencies. Investment from Government will automatically increase, once success stories emerge one after the other as priority of a government in a democracy reflects popular perception and aspiration.

Strengthening the interdisciplinary research through a network of national Ayurveda institutions, national medical institutions, good Universities and those of CCRAS institutions will certainly

help in research capacity building in Ayurveda and generate new solid knowledge relevant for action today and new developments for tomorrow. Such efforts will also help in creation of conducive environment to undertake interdisciplinary research using basic concepts and medicines of Ayurveda as well as modern biology. For instance, efforts like Ayurvedic Biology, Ayurgenomics have been undertaken through DST and CSIR. Such value addition based synergy and partnerships with ICMR/DBT/DST/ICAR etc. will be important for the growth of Ayurveda. In this context also, there is a need for defining the areas for collaboration, developing concrete plans, investing in them and monitoring the progress to achieve the targets; otherwise this remains a non-productive emotional talk.

To sum up, Ayurveda has the strength of being an old proven system of medicine with wide acceptability. However, contemporary published data is inadequate and efforts are too diffuse. Physical infrastructure, human resources for research and budgetary support for research are not strong. We should continue to emphasize the need to expand and have more resources. Strategic course corrections in defining priorities and concrete action plans will strengthen the eco-system for research in Ayurveda with demonstrable outcomes – this in return will attract more investments for required expansion and strengthening.

As a scientist and then science manager with faith in our ancient knowledge and heritage, I have closely followed the status of research in Ayurveda during recent years. I also had the opportunity to interact with academicians in Universities who are promoting research in Ayurveda and other systems in AYUSH, researchers in CCRAS, national/state institutions as well as policy makers in the Government. As a result, I have made some opinions which nevertheless have the limitation of not being based on the analysis of actual data in the context of diseases, complementarity etc. Thus, my impressions are subject to validation by generating/analysing good evidence. I hope that some of these thoughts will provide material for discussion and action.

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None.