

Guest Editorial

Orchestrating Research with Medical Education

India is known for its educational prowess since ancient times and is considered as the seat of few of the oldest universities in the world. However, with this unmatched heritage and deference in the area of higher education worldwide, India is yet to make an impact on global education scenario qualitatively. India now has over 600 degree awarding universities/ institutions, whereas in 1950 there were just 30 universities and the colleges affiliated to these were 695. Currently, the numbers of universities / higher learning centers have grown to nearly 700 with affiliated and constituent institutions approaching 40000 mark. Thus, it could be seen that there is a quantum leap in the number of institutions. Though, the higher education is considered as the peak stage of formal education, it should include more specialties required for socio economic development for a self-reliant country.

When we talk about socio economic development through higher education, research forms one of the major components of higher education, which apart from generating new knowledge plummets deep into the ocean of knowledge in every discipline to discover new relations, new theories and better understanding of numerous phenomena. Research in all disciplines, be it social, physical, chemical or biological sciences, is important for overall socio economic, intellectual development of a nation from all perspectives in building a self-sufficient nation. However, while not dishonoring the importance of the other disciplines; we are still compelled to acknowledge that science plays a pivotal role in bringing about perceptible changes in the quality of human life. Science has several distinguishable and tangible qualities, one of which is that, it is a source of genuine knowledge, which is verifiable through scientific methods in other words research.

Scientific enquires significantly improve and contribute to the material and spiritual culture of the mankind. Hence, dealing with science has to be with honesty and modesty with willingness to be assessed continuously. Though, many of the outcomes of the scientific research do not find immediate applications, all discoveries are known to have applications sooner or later in our life. In medicine, the outcomes of research are particularly less visible than in other fields, primarily because of the longer time interval between the discovery and application as it requires to be tested for efficacy and safety in human beings.

Research in India has been on a phenomenal rise since independence in almost all disciplines through the establishments of several centres dedicated to research. However, reports on the India's research output indicate dismal performance and is only 3 to 4 % of the global output even though India has the potential to perform. In the field of medicine, the research scenario is abysmally low and the Institutions involved in research are very few making the contribution insignificant globally. The fact is that India accommodates one sixth of the world population and the need for health related research should surpass all other areas of research. Though, India has achieved improvements in health care scenario through establishment of health care and training institutions, it still is the seat of many communicable and non-communicable diseases. India has been noted for neglected funding for disease related research and development and needs to address the issues straightaway. There is also gross shortage of human resources to cater to the health care and health research areas. The country should address both the critical components, the funding as well as trained manpower. Therefore, both health care and research should be a conjoint affair to achieve

and overcome many of the shortcomings in this vital area of human needs.

Majority of the medical training and service institutions are grossly inadequate in terms of infrastructure, investigative and motivational atmosphere. Consequently, the mentors and protégés are deprived to access the expanding areas of knowledge as well as contributing to the existing knowledge. It appears that to bridge the yawning gap between these components of medical service and research, the policy makers have to urgently team up, steam up and critically look into integrating strategies to instill the importance of medical research and ingrain the same in the curriculum so that the students would emerge as medical professionals who are geared up for considering research not only in the teaching institutions or institutions dedicated for research but also in hospitals and at community levels. These arrangements would visibly transform the overall approach and bring in confidence in health care professionals to perform and contribute to medical research.

It is noteworthy that Indian Council of Medical Research (ICMR) has successfully launched several research supportive programmes for students of medicine. Among them the popular one is the short term studentship (STS) for the undergraduates (MBBS) students launched by ICMR in 1979 with a mandate to promote interest and aptitude for research among the graduates. Similarly, there are schemes for providing financial support for research to Postgraduates and Doctoral students. All these are aimed at to motivate the medical graduates of brilliance to channelize for the career in the field of medical research.

Notwithstanding these promotional efforts for research by ICMR, creation of a Department of Health Research (DHR) in 2007 under the Ministry of Health and Family Welfare is a great initiative for promotion and coordination of basic, applied and clinical research including clinical trials. Its mandate include the development of infrastructure, training for manpower creation with skills and competence in various fields of medical science to promote research in medical institutions. DHR

has been supporting institutions with the facilities and competencies in the identified areas to conduct training programmes which is being utilized by the faculty of the medical colleges to acquire knowledge, skills and competencies.

Research in the health care sector is intricate as it involves human beings and needs to be taken up cautiously addressing all ethical issues. Incidentally, this area of research has been exploited commercially which tends to spoil the spirit of true scientific research. Thus, it is necessary that the health research need is well understood, conceived and executed to the benefit of the mankind. This warrants very precise and highly systematic investigations with clear objectives and approaches in this important area of research. The funding agencies of both central and state governments have formulated several innovative approaches to inculcate and support research not only among young scientists but also among the students of graduate and postgraduate levels in almost all disciplines including medicine. The fact is that there are not too many who make use of these initiatives purely due to lack of proper guidance to carry out research. It is therefore necessary that essentials and advances in the health care and research methodology are included in the curriculum of the medical course both at graduate and post graduate levels on a priority.



Dr. Bindu M. Kutty
Professor and Head
Department of Neurophysiology
NIMHANS
Bengaluru-560029
E-mail: bindu.nimhans@gmail.com