

SPECIAL ARTICLE**Current Status of Medical Research in India- Where are we?***Basavraj Nagoba¹ and Milind Davane²*

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Abstract:

Medical research, particularly clinical research adds enormous value in furthering science and adding quality to medical practice. Evidence based medicine is a new buzz world of Modern medicine. Medical colleges are expected to be the forerunner in the endeavor. But presently, medical colleges in India and also other institutes contribute very less to their present capacity. Lack of training and lack of appreciation are the major hindrances. They need to be corrected to the root cause to guide the medical practice in the country and further the Evidence Based Medicine which is a need of hour.

Keywords:

Medical research, training, evidence based medicine

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Research is an integral part of learning, development and innovations in any subject. It is one of the key areas which help in advancement of science. In Medical Sciences, it is important to produce documents

with evidence- based medicine, which helps in better understanding of the subject. Research helps to refresh and update the entire knowledge of the subject and thus, pave the path for further addition, improvement, up-

gradation and introduction of discoveries and new innovations. The quality medical practice is possible only through constant up-gradation of knowledge and skills. This habit of up-gradation automatically ignites the probing mind and provides the motivation to enter into research.

Medical education and medical research are nonseparable components of healthcare. Health research is of paramount importance as it provides knowledge regarding the health status, diseases relevant to our soil, changing pattern of disease prevalence, treatment strategy to be adopted, impact of various health programs initiated by Government, etc.

To remain globally competitive, the need-based clinically oriented research useful to patients in particular and general public at large is crucial and hence, quality research is must. It is an indicator of quality education and clinical care in medical institutes. Thus, research in medical sciences is an integral part of medical education and crucial to sustain quality.⁽¹⁻⁵⁾

Present Status of Medical Research in India:

Research is an integral part of medical education, but unfortunately it is the most

neglected part in a large number of medical colleges, in India. The scenario which we see today deludes our expectations. The research in medical sciences in India is not what it should be. Not only the quality of research is poor and low but also it is headed in wrong direction. Also it is irrelevant to the needs of our soil. The problems common to Indian soils such as infectious diseases, childhood problems, tropical diseases, etc. are ignored/given less importance and irrelevant fields like neurosciences, oncology and others are given more importance.^(1,2)

Analysis of Data:

Analysis of data shows that in 1998 (Nandy S.) out of 128 medical colleges, only 10 medical colleges were active in research and their papers were published in 113 Indian Journals out of which only 27 journals were indexed in index medicus. This shows that the overall quality of research was low.⁽⁶⁾

As per the ICMR report (2002), 27 out of 156 medical colleges did not produce a single paper and 29 medical colleges published only one paper. The report further adds that only eight top institutes were active in research as a result of which India's share in global literature in indexed journals declined from 0.9% to 0.5% during the period

1990-1994, which was much lesser than China, Thailand and Philippines. As per the data analysis report of index medicus (1998), India's share was only 0.714%, i.e., only 2974 articles out of 41656.⁽¹⁻³⁾

As per the report of 1998-2008, the India's share increased to 1.6% in the world research output. Unfortunately, a large number of medical colleges have shown dismal performance and it is shocking to note that 332 (57.3%) medical colleges from India had not a single publication to their credit during 2004-2014. A total of 157 researchers per million populations were reported in India in 2010, which was much less than the global average of 1023.^(3,4)

As per the recent report of 2016, only four Indian Medical colleges are among the top 10 global institutes that have publications in peer-reviewed journals. These are AIIMS, New Delhi, PGI Chandigarh, CMC Vellore and SGIMS, Lucknow. AIIMS, New Delhi with more than 1100 annual publications ranked third in the world after Massachusetts General Hospital, Boston, USA (74600) and Mayo clinic, Rochester, USA (3700). The results of this review concluded that the India has the best and the worst medical education in the world.⁽⁶⁾

From the year 2015, after the obligatory requirement of publication of papers by MCI for promotion of higher posts has led to the phenomenon of publish or perish. Again after the liberty to publish journals indexed in index Copernicus, there is mushrooming of large number of predatory journals with a system to pay and publish. A large number of articles are being published from almost all colleges from India; most of these articles are published in predatory journals. In last two years, literally uncountable numbers of papers have been published in predatory journals, most of these journals are from India.^(7,8)

Reasons for Poor State of Medical Research in India:

The quality of research is poor for the following two types of reasons:

1. Specific Reasons:

The quality of research is likely to be poor when the resources and training in research are lacking. In most of the medical colleges – both Government and Private – there is lack of basic infrastructure and facilities. Most of the medical colleges are lacking even in a minimum infrastructure required for research. However, in some of the medical colleges, the infrastructural facilities are available to the

fullest extent, but they are lacking in trained manpower. Thus, either gross shortage of resources or gross shortage of trained manpower or both are the important reasons for poor quality medical research. No exposure or less exposure of faculty and consequently of students to the latest tools in biomedical research is another important reason which makes faculty and students reluctant to use modern techniques. Lack of appropriate training programmes in research methodology is also one of the reasons. Lack of developing research project is another important reasons for poor quality of Medical research.⁽¹⁻⁴⁾

General Reasons:

These include lack of scientific temperament, less weightage to research in academic progression, lack of encouragement/motivation for research, non-availability of structured mentorship programs, lack of writing skills required for biomedical publications especially of international level, no extra incentives/benefits for research, lack of accountability, lack of fully functioning academic committee/body to promote research both within and outside the institute. Only one body – Indian Council of Medical Research. MCI does not provide any

funding for research purpose. Hence, lack of funding is also an important reason, disinterest of Deans and Directors in most of the medical institutes, and surprise inspections by MCI are one of the small reasons, which do not allow faculty and students to attend conferences meant for academic up-gradation and presentation of their research papers. Most of the conferences are organized during the months of November to February, a period during which surprise inspections are conducted by MCI and hence, there is academic hindrance are some of the general and non-specific reasons. Moreover, research is a very long journey to get academic acclaim that is one of the reasons for less interest in research.⁽¹⁻⁴⁾

What can be done to enhance the quality of Research?

To remain globally competitive, quality research is must. To enhance the quality of research, we need to rethink about the following issues:

Funding:

Currently, the research funding in general and medical research in particular is very less in India. Only Indian Council of Medical Research gives funding for medical research. For qualitative as well as

quantitative increase in medical research, funding should be increased and optimum and proper utilization is to be ensured.

Resources:

The quality of research is likely to be poor when the resources are lacking. Hence, the availability of useful resources is very crucial in conducting quality research.

Training:

The quality of research is likely to be poor when appropriate training of faculty and students in research methodology is lacking. The proper training in research methodology would be helpful to enhance the quality of research.

Motivation:

The lack of motivation is one of the important reasons for poor quality of research in India. Hence, the real workers (MD/MS/PhD students) are to be encouraged and motivated for high quality research.

Credit:

Most of the times, the actual work is done by one or two persons but the PG teachers, head of the departments, etc. consider it their right to be included as the first or second authors and the actual workers are ignored or their work is high-jacked by their bosses and published as their own work.

Proper credit for research to real workers is to be given. Their work should not be high-jacked and published as an own work by the bosses.

Incentives:

Extra incentives to faculty members involved in research may act as an impetus to work further. Hence, the researchers should be offered extra incentives for good quality research and good quality publications.

Many countries have made it mandatory for their medical faculty to do research; some other countries give incentives to conduct and publish. ^(1-4, 8, 9)

It is proved beyond doubt that research is expensive, but in the long run, not doing the research is more expensive.

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