

Editorial

Promoting Research in Medical Sciences

In the current scenario, lot of emphasis is given to developing medical education in the country. Consequently, we do see quantitative growth in the number of medical colleges and enhancements of intake of the existing institutions. However, medical research, an important element of medical education, has not yet got the desired momentum.

Teaching, patient care and research are the trio of medical education. These three components are independent and complementary to each other at both levels: the level of acquisition and the level of delivery. Medical graduates need to focus on these three components equally. Amongst these three integral components of medical education, the performance of medical research ranks the poorest.

Research, according to Webster dictionary is a “studious inquiry or examination; especially: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws”. It has been a backbone of all radical breakthroughs in medicine. But in our country, this paramount area has been faced with many challenges and obstacles with a lack of awareness of importance of research.

Today, the students have become lopsided at acquisition level due to lack of time availability, social pressure and at times mere lack of guidance. For example, he pays poor attention to theoretical learning at the pre-clinical levels, hardly involves in any research and skips the crucial clinical skill training during internship. He focuses entirely on rote learning (solving MCQs and related theory). Consequently, he qualifies the PG entrance without any in-depth knowledge, understanding and required competence. Thus, he fears the exit exams. Since he sees his future as super specialist in particular field, he keeps on postponing the skill acquisition to a later date.

The major purpose of medical education is to produce “Doctors”. Importantly, the academic component should never be missing in doctor’s persona. Similar argument is applicable to “Medical teachers”. A medical teacher especially in pre-clinical sciences should be dynamic with multiple roles. - a researcher, academician, clinician and an active partner in allied areas. In preclinical sciences, the teacher is supposed to possess several more skills than a simple knowledge provider (Harden and Crosby 2000). A medical teacher is currently more acutely focussed to deliver the task with less effort and minimum risk taking in imparting academic decision during examination. This results in poor quality of medical graduates.

Two reports released in 2016 (Lancet 2016, BMJ 2016) to public and now available in media, clearly say that the country is facing severe crunch of quality in medical education. There is need for robust regulations in medical education in the country, keeping in mind the socio-cultural needs of our country. There is an emergent need to devise and develop the “Indian Medical Education Curriculum”, rather than sticking to the old curriculum. The “borrowed curriculum with cosmetic corrections” is not enough to serve the needs of modern medical education in our exponentially developing country.

The recent publication in the Lancet, which has been widely quoted by Indian media blames the complete system failure in medical education in the country. The Lancet reported that over 332 of 579 (57%) medical colleges didn’t publish a single research paper between 2005 and 2014. There is no denial of the fact that our medical fraternity is not doing enough quality research which is expected from them.

There is a large number of medical colleges in our country and their numbers are ever growing. The universities to which they are affiliated also carry no indulgence to stress on research. The current regulations have no guidelines on the academic output of the college/institution. Apart from that, the recent regulation on the requirement of having certain minimum number of publications for promotion has resulted in serious upsurge of "bogus journal publications" in the country, which have become a seriously damaging business to academics. The whole country's medical education community is being misguided/exploited and the society and academia are being befooled on the name of research. There is a serious need for regulation of research publications of authentic medical journals in our country.

The most important institutional factors leading to this are patient overload, poor infrastructure and funds crunch. In my opinion, lack of motivation, absence of dedicated allocation of research funds and poorly trained medical faculty are squarely responsible for this situation.

In order to improve the quality of medical education and research the following are some suggestions:

- a. Sincere implementation of existing policies of research components, provision of positive reinforcement of research by postgraduates/faculty and regulation of research publications.
- b. The contractual appointment is becoming a commonplace now. One year long, renewable appointment of faculty is antithesis to research. Faculty on renewable appoint is not given research project, he cannot provide research guidance and his potential remains under unutilized in medical education. It would be appropriate to have detailed contract conditions which include at least 6 years contract (or two terms of 3 years each). The 6 years justifies completion of at least two projects of 2 -3 years each. The contract condition must be inclined in favour of productive research and better academic outcome rather than administrative technicalities.
- c. Currently several medical colleges and medical universities are loaded with allied courses like Nursing, Physiotherapy, Dentistry, Laboratory technology courses and others. They all require teaching of Physiology and allied subjects. The further reduction of number of faculty in medical colleges by MCI has put severe strain on working of physiologists and other disciplines. In such a scenario, there is a need to create separate research cadre for in-depth research in medical sciences, if the workload exceeds the work limits.
- d. Provision of adequate infrastructure for research.
- e. Mechanism of a comprehensive dialogue between academic institutions, academic associations, regulators and society.
- f. The time has come for switching to performance based recognition and linking the performance to the admission/recruitment process. Since the Medical Education has become almost an industry, the market forces should be brought into regulation and governance.

Since Physiology is a pre-clinical medical subject, the onus of doing fundamental research lies with the physiologists and other basic medical disciplines. Teaching alone would not be sufficient to vouch for prestigious space in the medical sciences. We must encourage, individuals, academic bodies, and professional associations to overcome intrinsic weaknesses, seize available opportunities, encourage positive research activities, and utilize our strengths in order to create a conducive atmosphere for research and foster ahead.

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