

Why do we lack a research culture? Analyzing the Indian Medical landscape - Response

Dr. Gopalan Balachandar¹



Dr. Gopalan Balachandar

Dear Sir,

I read your analysis on the lack of research culture among Indian postgraduate students with interest. I commend you for providing insight and a solution to the problem. My intent of writing is to dissect along the lines of lack of direction, intelligence, and initiative [1].

Let us presume that a student has missed the boat in undergraduation, which represents the current scenario to a large extent. He or she is then forced to inculcate this habit during their residency. The resident figures out a research topic (though this level of autonomy is rare). This is followed by reviewing the literature, drawing a hypothesis, collecting materials, planning methodology, analysing data and writing multiple drafts. Certainly, it is more arduous to get into a research habit within three years of residency, when it has not been incorporated in the six years of medical school prior. In order to facilitate this transition, most universities allocate a research mentor to each student. The mentor must have reasonable achievement in the world of research by way of original articles published in reputable journals (in the cadre of a professor or senior consultant with many years of experience). This utopic situation does not exist in every department of every specialty in India. In their absence, a senior colleague then becomes the mentor. Again, due to the time needed to perform original research, most of the senior colleagues cannot be expected to have credibility in this dimension. Can such a senior colleague guide the resident in a reliable way? Every student must have had the experience of his or her draft re-written, only to get the grammar or syntax of a sentence corrected, instead of the content or methodology. Does this enhance the critical thinking of the resident? Presence of "gift" and "ghost" authorship in the resident's academic climate may influence his or her own attitudes toward original research in the future. In a conference proceeding there is at least one presentation by a resident which may not be his/her own work (to gain individual recognition) or a rehash of previously presented work (to maintain institutional reputation). Such an atmosphere begets wrong attitude towards science. Therefore, and to a large extent, the onus of heading in the right direction rests more on the mentor and the institute.

Howard Gardner [2] described seven types of intelligence, five of which should be ideally present in the surgeon-scientist, namely, interpersonal, kinaesthetic, spatial, linguistic and logical. Among these, research requires linguistic, logical and interpersonal intelligence. Although these various facets of intelligence can be honed with time and practice, it may not be for everyone. Research is collaborative work which rests on the interpersonal intelligence of all the participants. Hence, being an intelligent resident with lot of information is not enough. By the same token, selectively possessing either linguistic or logical intelligence may be a deterrent for scholarly writing.

Lastly, initiative is an innate drive to perform an action. With regards to research, there must be a motivation for performing it. Research in academic departments is done for knowledge, peer respect, promotion or financial grants. Residents need research as dissertation to appear for exams. Research done in pursuit of knowledge is the ideal intention. Hence, motivation that stems from a profound curiosity translates into good research, which transforms into a lifelong endeavour. Such intention offsets disadvantages such as long duration, criticism, rejection by reputable journals, and the risk of never reaching recognition even when published. On contrary, if research is done for the other reasons then it would be dull, short-lived and derivative in nature.

It is wise to change things which are under our control than which are not. With particular reference to research, self-motivation is entirely under control of the individual. Intelligence varies among individuals, but it can be developed to match the motivation. Environmental factors such as institutional reputation, department discipline, credentials of superiors and inspirational mentors have a major role to play in providing direction, with little in control of the resident. It is a one-dimensional view that lack of direction is the reason for lack of research culture in India.

There are various solutions to improve the prevalent state of medical research in India. Increasing the duration of residency, at least in orthopaedics, from three years to five or six years, similar to those in the developed countries will help them gain broad and deep knowledge of the subject. The residents will also have enough time to investigate a topic of their interest. Given the time period, a study with sufficient sample size can be obtained with good external validity. Since it may be difficult to increase the duration of residency in India in the near-term, suggestions have been made to incorporate research methodology in undergraduate study. For the majority of residents at the onset of postgraduation, allocating a fixed amount of time everyday for research, developing an aptitude for writing, critically analysing articles, and learning basic biostatistics will go a long way in establishing themselves as surgeon-scientists. Strong motivation with idealistic intention at individual level is the key to transformative research.

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Dr. Ashok Shyam¹



Dr. Ashok Shyam

Thanks Dr Balachandar for his letter on the topic of research and medical education in India. As rightly pointed the problem is multifactorial and most assessment of the situation will be incomplete as many are based on empirical experiences rather than data. In this sense too both our assessments are purely based on our personal experiences and opinions of the ground reality rather than actual ground reality. Most of what I wrote was out of my own experience in residency and my experience in my current institute. I am sure many more issues plague the students all across the country and many more reasons for their lack of direction in research and publication are yet to be explored. Possibly a survey in all first year residents can be performed to assess this situation and find some concrete data which will enable us to act or at least plan to act.

Sincerely ,

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