

## Improving the Involvement of Undergraduate Medical Students in Research: The Need of the Hour

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### Dear Editor,

Research is mandatory for the progression of the medical field. Research plays a pivotal role in diagnosing and treating the disease. Hence, it is necessary to train undergraduate students in research and academics. This will help to promote medical education standards too. The major discoveries contributed by the medical students include heparin, insulin, the sinoatrial node, and ether anesthesia. Medical teachers have to take active strategies to make it still more discoveries. One should keep themselves updated with the latest research on a particular topic and explain it to the students. This will make students think about it and get back with innovative ideas. It is very essential to encourage the students to express their ideas. In some cases, the ideas may lead to major innovation. However, involving in research should not be made mandatory to undergraduate students. Teachers should motivate the students about the research and research grants given by the central bodies like ICMR and state universities like YSRUHS, etc. Those who voluntarily accept to be involved in research can contribute much better than those who joined forcefully. Students should be taught that research innovations are also a way to contribute to the development of the country.

Teachers should provide them with an environment so that the students can approach the teacher and share their ideas. One simple example I have seen is once I was demonstrating the radial pulse and a student asked me if there would be a difference in the pulse rate in the right and left arm? Then, I encouraged her to conduct research by recording and reporting the pulse rate of all

her batchmates. The statistical analysis was done and the paper was published as “Inter-arm difference in the blood pressure pulse rate in young adults”. So, a small doubt by the student can be turned into a wonderful and informative research article.

The active role of the teachers is most important to train the students in research. Every interested teacher can consider four to five students under him and train them to conduct research activities, making them aware of different grants for students and providing them opportunities to present the research papers.

Similarly, students must be encouraged to present papers at the medical conferences. So that they will get exposed to the latest updates in that field and be motivated. Getting a prize is not the major criterion for attending a conference. If they get it, it is very good. Indian Council of Medical Research is motivating the students with the STS program. However, many students are not aware of the program. Similarly, many state universities and associations offer funds for undergraduate students to conduct research work. The students have to be taught how to conduct the research, from forming a research question to publishing or presenting the research article. Progression in the medical field happens only with research and innovations. Hence, medical students must be trained and given opportunities to conduct the research. In countries like the UK, points are awarded for having research experience for admission to medical schools.<sup>1</sup> Similar importance for research is given in Saudi Arabia for the progression of medical students’ career.<sup>2</sup>

#### Access this article online

##### Website:

www.cijmr.com

##### DOI:

10.58999/cijmr.v3i01.140

##### Keywords:

Undergraduate students, Research, Medical Research

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Submitted: 19/10/2023

Revision: 05/11/2023

Accepted: 01/02/2024

Published: 20/04/2024

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**How to cite this article:** Goothy SSK, Bethiun S, Parvathi R, Choudhary A, Mahadik V K. Improving the Involvement of Undergraduate Medical Students in Research: The Need of the Hour. Central India Journal of Medical Research. 2024;3(1):32-33.

Most of the medical colleges have 100 to 150 seats on average. Out of 150 or 100, if 25 students are motivated to do research, that would be a great achievement. The institute can produce 25 research articles by undergraduate students per batch and 100 papers from all four batches. This will greatly improve the institute's research activities. As it was very aware that bodies like NAAC and NIRF give more priority to research, this act can improve the ranking of the institute as well. Hence, improving undergraduate medical research has dual benefits. That is the student will improve in research

activities and the institute. Every medical institute should give importance to this undergraduate medical research for better innovations in Bharat.

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