

Commentary

## Status of research and publication in India

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### ABSTRACT

India is potentially in one of its excellent growth phases in various aspects and one of those is medical research and publishing. Although India's scholarly output has increased in recent years, it still has a long way to go, in terms of both quantity and quality, to catch up with the global leaders in this regard. The real impediments to this are the inadequate communication and linguistic skills of Indian researchers on one hand, and the limited dissemination of the nuances of modern research methodology and basic biostatistics on the other. If Indian scientific literature has to attain true global standards, our researchers have no other option but to improve their skills on all these counts. The rise of artificial intelligence and its misapplication will only serve to further complicate a situation where the best of our clinical journals are struggling hard to improve the integrity and quality of their scientific data.

**Keywords:** Research, Publication, India

India is potentially in one of its excellent growth phases in various aspects and one of those is medical research and publishing. India's scholarly output has increased from 60,555 papers to 149,213 papers, and India's position globally in scientific publications has improved from 7<sup>th</sup> position in 2010 to 3<sup>rd</sup> position in 2020, according to a report by the US National Science Foundation. Researchers and clinicians from the country are bringing out cutting-edge clinical information for the global audience to consume and the medical fraternity to look forward to, while improving health-care services. However, the same level of efficiency is yet to be reflected in the way that such research reports are presented in the form of articles in competitive, double-blinded peer-reviewed journals. As per the HRD Ministry's Education Quality Upgradation and Inclusion Program (EQUIP) report of 2019, only 15.8% of the total publications produced by Indian researchers feature in the top 10 journals globally. On this account, India trails behind the UK, which has 37.3% of research work published in the top 10 journals, the US (36.2%), Germany (33.4%), and China (27.6%). This data matches the Scimago Journal Rankings report, according to which India ranks fifth in global research publication output. However, the countries mentioned above continue to dominate the world rankings both in terms of quantity and quality. As per the EQUIP report, none of the Indian institutions are among the top 100 research and innovation institutions in the world.

Despite medical research reaching global heights, in some instances, where work from India is cited by contemporary researchers from the West, the level of scientific writing has a long way to go. At best, the overall quality of scientific writing in our country is mediocre. Despite our ever-improving clinical efficiencies, the overall grasp of the clinicians and researchers in their communication abilities still leaves a lot to be desired. In dermatology, though the situation has improved quite appreciably over the past decade or so, there is still a palpable lack of adequate understanding of the finer nuances of modern research methodology and basic biostatistics even among a significant proportion of senior researchers and faculty. Thus, despite bringing out significant clinical data, authors from India face rejections in competitive clinical journals from the West and even in our own country's top-rated journals. At the same time, journals from India, face the dilemma of whether to retain articles, based on novel, relevant and interesting clinical facts, or to reject the same due to poor writing or reporting quality. This further results in long delays in manuscript processing, prolonged article turnover time, and tardy final decisions. At the same time, established and prestigious society-based journals struggle to improve the quality of poorly written content from the contributors. All these situations directly and indirectly negatively impact any journal's growth as well as the growth of individual authors. In such a situation, to muddy the water further, has entered Artificial Intelligence (AI) and AI written manuscripts.

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Authors from the developing world, specially from India and South-East Asia, were the first to jump on the bandwagon, and several authors, without even understanding the possible ramifications of such an action, have begun (mis)utilizing the technology. An AI can surely significantly improve the overall linguistic quality of an article, but when it comes to a clinical research paper, AI is not the tool that should be used to modify the presentation of the article, especially the materials, results, and the discussion. A software is not capable of implementing the human touch, or to use the references, to buttress the story of the presentation based on the clinical data, which are probably new research findings coming from the authors.

Moreover, there are instances where AI was given an authorship status in some journals, only serving to confuse the confusion further. Thankfully, the global scientific community, represented by the likes of the World Association of Medical Editors (WAME) did not welcome the move and, now, authors who have taken the aid of AI in completing their manuscripts have to provide a declaration of the same in most journals.

The best way forward for practicing clinicians in India is to take help from professional scientific writers to shape up their article presentation, and for the journals to engage and develop a cadre of language editors who can fine-tune the same with their human efforts. However, in the longer run, the authors need to develop their own writing skills and skills in research methods, because unless they become better writers and investigators themselves, they do not complete

the cycle of scientific research and would not be able to compete or present their facts on a global stage.

Scientific writing in India has a long way to go. With the upcoming technologies, it is obvious that authors will have a natural propensity to take the easier route of paying for the same and be done with it, whether it is with language, research methods, or statistics; however, if instead of taking the easy paid route as a default practice, investigators work on improvising their skills as researchers and authors, not only the overall presentation of their manuscripts will improve but also as clinical researchers, at the end of the day, they will have the complete satisfaction of successfully publishing their findings.

#### **Declaration of patient consent**

Patient's consent not required as there are no patients in this study.

#### **Conflicts of interest**

Dr. Saumya Panda is on the editorial board of the Journal.

#### **Use of artificial intelligence (AI)-assisted technology for manuscript preparation**

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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