

■ *Editorial*

Scientific publications and peer-review systems in bio-medical journals

B P Badhu
Professor and Head
Department of Ophthalmology
BP Koirala Institute of Health Sciences, Dharan, Nepal

The number of scientific articles submitted to journals for consideration of publication has increased in recent years in Nepal. This can be explained by increased amount of postgraduate thesis works and requirements of the academic institutions from their faculty members to have publications for career promotions. The other reasons for the submission include an interest to have name on print or to increase points on curriculum vitae. However, the most important reason for publication must be dissemination of scientific research achievements. The editorial board has the responsibility of improving scientific merit of the published articles not only for international accreditation but also for a valid transformation of knowledge into clinical practice. The job of an editor is further complicated by plagiarism, duplicate publications and fraud data. One of the ways of getting all this eliminated is implementation of an effective peer-review system, which is meant to assist the editors in selecting the papers for publication that are original, scientifically significant and ethically acceptable.

Though the first scientific journals appeared in France and the UK in 1665, peer-review of manuscripts started only in 1980s.¹ The peer-reviewers are usually the people identified by the editors as the subject experts not from the same institute where the paper is submitted from. This is emphasized to avoid bias due to professional rivalry or conflict of interest. An example of this can be considered when Ridley in 1949 was mocked and rebuked by his colleagues in a conference for the first case report

of successful implantation of intra-ocular lens (IOL) after cataract surgery. Those who criticized Ridley in the conference, regretted later at home why they did not think themselves of implanting an IOL before him!

The system of peer-review has certain demerits. It is a time consuming process resulting in delay in publications. By the time the paper has been peer-reviewed the research finding of the paper may be outdated being of less interest for the readers. The peer-reviewers usually are expected to volunteer their academic expertise. Finding adequate number of volunteer reviewers can be difficult.

Horrobin (1990) describes how the peer-review turned down the work of Hans Krebs (a Nobel Prize winner for this work) on citric acid cycle (Krebs cycle).² Smith R (2010) argues that the reviewers can steal ideas and present them as their own³.

Despite these flaws of pre-publication peer-review, there is hardly any alternative to it. There are, however, some ideas that emphasize the importance of post-publication peer-review, which would denote value of several readers and their comments and that that could replace the pre-publication peer-review. This would require publication of all the submitted articles, which is practically impossible and scientifically unjustifiable. The post-publication peer-review is important which is expressed by the impact factor or citation index of an article or a journal.

The question that can arise with respect to the peer-review system is whether it should be open or anonymous. There are critics for and against both of them. On one hand, the peer-reviewers can have an in-built bias against the findings of other researchers which may have a place in anonymity. The open reviewers are less likely to be influenced by personal interest because they are identified to

Address for correspondence
Prof. Badri Prasad Badhu
Department of Ophthalmology
BP Koirala Institute of Health Sciences, Dharn, Nepal
Email: aabadhu@yahoo.com

the authors. It is considered that the open review system increases fairness, accountability and transparency. Additionally, the majority of the authors prefer an open review system. However, on the other hand, most of the reviewers decline to accept reviewing articles openly.^{3,4}

The British Medical Journal has adopted the open peer-review system for ethical reasons. It has been reported that the quality of review is not affected by the type of peer-review system: whether open or anonymous.⁴

In our context, what I think is that the peer-review system is essential for improving quality of scientific publications. The authors and the reviewers can be asked separately if they wish to be identified to each other before moving into the compulsory open peer-review system.

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