

## The art and science of peer review

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It would perhaps be appropriate to say that the backbone of any journal is its peer reviewers. The Telangana Journal of psychiatry has come a long way since its launch four years ago because of the dedicated team of peer reviewers working tirelessly for the journal.

The term peer review is used to describe a system whereby a paper is scrutinized by people who were not involved in its creation but are considered knowledgeable about the subject.<sup>1</sup>

Peer review has become the gold standard by which a journal judges articles submitted to it. Peer review is known to raise the standards of the articles and thereby the journal.<sup>2</sup>

Reviewing papers is never taught and one often learns on the job. It is the correct balance between art and science that makes a good review. Review is time-consuming, largely unpaid and is often done by a disproportionately small number of members of any scientific society. Studies have shown 20% of reviewers perform 69-94% of the reviews.<sup>3</sup> Peer review has often been criticized as being biased and open to abuse.<sup>4</sup> Peer reviewers therefore remain by large the unsung heroes of the scientific community.

What then motivates a reviewer to take up the job?

The sense of privilege and the great sense of responsibility that comes with peer reviewing for a scientific journal is possibly in itself a reward. The reviewer acts as an advocate not only of the author but also that of the journal, indirectly serving the scientific community at large. The reviewers act as a filter between good and bad research.

The way reviewers are chosen, the responsibilities given to them and the various systems of peer review differs from journal to journal.

Usually an editor inherits a list of reviewers actively reviewing for the journal. When an editor chooses the reviewers they usually choose someone known to them and who are well versed in the subject content. Studies have shown that reviewers chosen are usually younger and work in top academic institutes. Reviewers are also suggested by other reviewers and some volunteer their services to review for the journal. Sometimes journals ask authors to suggest four reviewers themselves. No Matter how the reviewer is chosen the final responsibility lies on editor to make sure that the list of reviewers includes people with content expertise, methodological expertise and statistical expertise.<sup>5</sup> It has in fact been shown that adding a statistical expert improves the quality of the article.<sup>6</sup>

Once chosen the responsibility of the reviewer is manifold. The ethical rule one should follow is that the reviewer should treat the paper they are about to review in the same way that they would expect their article to be reviewed.

It should be kept in mind that the review is of the article and not the author.

The reviewers comments therefore should be respectful, yet giving adequate direction to the authors for improvement. The duty of the reviewer is to guide the author to make proper corrections in order to give a final shape to the article. Comments should be elaborate, yet to the point, marking out specific issues that need to be addressed. It is good practice to point out all the possible areas where the author could improve even when the final decision is to reject the article.<sup>6</sup>

Many journals provide reviewer forms to be filled with a grading for all aspects of the paper like abstract, methodology, discussion, results and overall language of the paper. It may also include a section for comments for the authors and confidential remarks to the editor not to be passed on to authors. A final decision to reject or accept the paper or send for corrections is sought from the reviewer. This is done with the purpose of helping the reviewer to organize their thoughts. Some reviewers send in the reviewer form with only the grading without pointing out areas that need correction. This turns out to be a bane for both the author and reviewer.

A reviewer in his capacity as a journals advocate should ensure that the article submitted is clinically relevant, has sound methodology, the results support the conclusions drawn and that ethical requirements are met, for example taking consent and ethics committee approval. Serious issues of conduct like plagiarism should be immediately reported to the editor.<sup>7</sup>

The journal for which the review is being done should also be kept in mind of the reviewer. A small sample size yet a well written article may still be adequate for a non-indexed journal.

Reviewer has to keep certain things in mind before accepting an article for review and while reviewing an article. Bias should be avoided at all costs. A positive bias is unfairly favouring an article while a negative bias is unfairly rejecting an article.<sup>9</sup> Reviewer has to ensure confidentiality and not discuss the article with others during the process of review and destroy all files connected with the review once the review is submitted. He should also declare any conflict of interest at the outset, accept to review an article only within his area of expertise and to complete the review on time.<sup>8</sup>

A reviewer who does a thorough review and submits on time is an editors delight. Sometimes the review can stretch on for months. Studies have shown that authors considered more than 14 weeks of review to be a delay in review. A delayed review has repercussions. It effects author's promotion, reduces the chances that the author would submit

again to the journal and the opportunity to publish high-quality research is lost. The reasons cited for the delay in review are usually reviewers and editors fatigue, the length of the manuscript and the number of reviewers.<sup>10</sup>

It then becomes editor's responsibility to keep the reviewers engaged and feel rewarded for their work. Publishing the list of reviewers and the number of articles reviewed by each can act as a source of encouragement. Informing the reviewer about the final decision of the article keeps the reviewer involved till the end. Editor also needs to provide clear instructions to the reviewers before the start of review outlining the expectations from the reviewers. Setting deadlines for submission and timely reminders keeps he reviewers alert and engaged.<sup>6</sup>

The types of peer review vary according to the policy of the journal. Open, blinded and post publication review are some of the methods used. Each system comes with its advantages. An open peer review allows the author and reviewer to know one another and the review itself is in public domain. Studies have found that this leads to more time spent on the review and the quality of the article improved and the chances of rejection were less. Blinded reviews helped in keeping the review process fair and unbiased.

Peer review is a fine balancing act between art and science and the reviewers have to ensure a sincere, unbiased review keeping the needs of the journal and the authors in mind. It is an opportunity that comes to few and should be dealt with all the respect it deserves.<sup>11</sup>

## References

1. Wager E, Godlee F, Jefferson T. What is peer review. In: Wager E, Godlee F, Jefferson T, editors. *How to Survive Peer Review*. London: BMJ Books; 2002. p. 3-12.
2. Goodman SN, Berlin J, Fletcher SW, Fetcher RM. manuscript quality before and after peer review and editing at *Annals of Internal Medicine*. *Ann Inter Med* 194;121:11-2.
3. Kovanis M, Porcher R, Ravaud P, Trinquart L. The Global Burden of Journal Peer Review in the Biomedical Literature: Strong Imbalance in the Collective Enterprise. *PLoS ONE* 2016;11(11):e0166387. doi:10.1371/journal.pone.0166388.
4. Vesna Šupak Smolčić, Ana-Maria Šimundić. Peer-review policy and guidelines. *Biochemia Medica* 2014;24(3):321–8.
5. J.C. Winck, J.A. Fonseca, L.F. Azevedo, J.A. Wedzicha. To publish or perish: How to review a manuscript. *Rev Port Pneumol* 2011;17(2):96-103.
6. Marusic M, Marusic A. Good editors practises. editors as educators. *Croat Med J* 2001;42:113-20.
7. Benos DJ, Kirk KL, Hall JE. How to review a paper. *Physiol Educ* 2003;27:47-52.
8. Gius Lippi. How do I peer-review a scientific article?—a personal perspective. *Ann Transl Med* 2018;6(3):68.
9. Jame Provenzale, ale, Robert J. Stanley. A Systematic Guide to Reviewing a Manuscript. *J Nucl Med Technol* 2006;(2):34.
10. Nguyen VM, Haddaway NR, Gutowsky LFG, Wilson ADM, Gallagher AJ, Donaldson MR, et al. How Long Is Too Long in Contemporary Peer Review? Perspectives from Authors Publishing in Conservation Biology Journals. *PLoS ONE* 2015;10(8):e0132557.
11. Horbach, Halfman. The changing forms and expectations of peer review. *Res Integr Peer Rev* 2018;3:8.