

PEER REVIEW PROCESSES AND RELATED ISSUES

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Comprehensive appraisal of manuscripts submitted in journals and prioritization of the chosen manuscripts to publish are the pillar of communiqué in medical science. In reality, the peer review is not an exclusive processes for medical journals but a process of the whole science disciplines. Peer review is a process in which a research paper or project being analyzed by a third party who is not author and neither someone who is competent to decide about the publication of paper or to allocate the grant. Through this process, the research grants allocated, papers are published, academics are promoted and even Nobel prizes are decided. For indexation in prestigious bibliographic database, reliance on effective and convenient peer review process is essential¹. The journals that effectively and meticulously manage and maintain their reviewer's database enhance their chances of indexing in database and global visibility in literature². At the other end, peer review process it is difficult to define comprehensively and critically because the limitations of this process are easy to recognize as compared to its attribute³.

The decision of suitability or unsuitability to publish a manuscript requires a "peer review" process. A journal's scientific impact is increased significantly by the involvement of well experienced reviewers which facilitates the publication of high standard manuscripts in journal. The importance of the professional contributions of reviewers, who should be skilled in research reporting, statistical analyses and publishing has been emerged in past few decade⁴. Presently, majority of high impact and successful journals have a pool of experienced and devoted reviewers, whereas the other journals are struggling to establish the pool of cooperating experts. The common perception about peer review is that it is one of the most powerful evaluation tool which is reliable, highly objective and a consistent process. Whereas, the other opinion is that it is inconsistent process and difficult to accept that it is subjective^{1,5}.

With the rapid developments in digital technologies, internet and software's, the nearly all features of peer review has changed remarkably. Selection of reviewers has become much easier by online searching the relevant publications. Similarly, the communication with all contributors of the process has also become quick and convenient. Moreover, the reviewers have the facility of online bibliographic tools to comprehensively evaluate the originality, integrity and ethical issues of the manuscript. With the help of these technological evolutions the timelines of review has been reduced to approximately two weeks and up to five weeks for an editorial decision in an average manuscript⁶. By these accelerated mechanics, the manuscript submissions in journals has been increased exponentially. Unfortunately, so far no comprehensive policy has been proposed to reward the reviewers for contributing their valuable time and in contributing to the integrity and quality of research papers or proposals⁷.

The one of the important task of the editors is to decide whether a manuscript should be accepted or refused and this is usually accomplished through "peer review" process. Due to this, the journals need to choose the high quality papers from this large number of submissions which leads to the evolution of peer review process to fulfill this need^{8,9}. Nowadays, majority of high impact and famous journals have a team of expert editors and staff to supervise the peer review process and they do not rely on in-house review only. At the other end, most of the journals do not have a large staff and rely on the external reviewers to evaluate the manuscripts. It is assumed that usually an invitation to review from well known or high reputed journals has been accepted and the reviewers are usually reluctant to accept invitation to review from ordinary journals⁹.

The peer review process has been criticized for its bias, proneness to abuse and slowness. It is also expensive and there is a lack of strong evidence of its effectiveness^{2,4}. The important question regarding this process is that what is the contribution of this process in evaluation of the manuscripts and does it 'work' at all? Although, to select the best manuscript or research projects the peer-review process is a valuable but there is some concerns and criticisms about the authenticity of this process. The scientifically valid papers may wrongly be rejected or the flawed papers are accepted and similarly there may be biased against the comments of the reviewers^{4,9}. Secondly, the peer reviewer process can be abused in several ways. One can steal the hypothesis or ideas and present it as their own⁹. Moreover, the review can be produced unjustly harsh to block or to delay the publication of a competitor author. The evidence regarding the biasness against certain authors in peer review is inconsistent, but literature has reported strong evidence of bias against female especially in the process of grant awards¹⁰. In this regard, the most prominent evidence about bias against authors has been reported by Peters and Ceci in their study¹¹. Regarding slowness of the process, majority of the journals, even in internet era, usually take a year or more to review and publish a research paper. It is not possible to get a good data regarding the peer review cost. Usually, majority of the journals don't pay to the reviewers but according to economists there is a substantial 'opportunity cost', which is the time consumed in reviewing the manuscript could be spent in doing some more productive work like clinical work or original research etc. Smith has reported that the cost of peer review of a manuscript of BMJ is around one hundred pound per paper⁵.

A systematic Cochrane review of all available literature evidences on peer review process by Jefferson concluded that 'the practice of peer review is mainly based on faith in its effects, rather than on the facts'¹². To me the most appropriate question is needs to answer is that 'What is the peer review for? One answer is that it's a process to choose the best or good quality manuscript to publish or to select the best research proposal for funding. But it is very difficult to test these criteria due to lack of agreed definition of what constitutes a good research proposal or a research paper. Another question needs to be addressed is that, what is peer review to be tested against? Should it be tested against chance or it is simply a process? Another most important question is how to improve the peer review process? Different options and suggestions have been recommended and tested experimentally. These include standardizing the review process, keeping the process open, following the reviewing protocols, training of reviewers, anonymising the authors identity,

by meticulously selecting and deselecting the reviewers, use of checklists, rewarding the reviewers, use of electronic review, provision of comprehensive feedback to reviewers and establishing professional review agencies. In a systemic review by Galipeau and his colleagues to investigate whether training in peer reviewers improves effectively the educational outcomes in relation to the quality of manuscripts shows inconclusive results. They observed the gaps in the knowledge regarding how to ensure and improve the scientific worth of research paper among journal editors, peer reviewers and authors¹³. Alternatively, the approach would be to take up a fast and mild form of peer review and then let the others to analyze and critique the paper and even perhaps can rank it in the way that different organizations request their clients to rank their product like books, CDs etc.

So the peer review is a defective process which is full of easily recognized flaws and little evidence that it always works efficiently. At the other end, it is most likely to stay vital to journals and science due to lack of any no obvious substitute and continuing belief of editors and scientists in this process. In my opinion the basic principles of peer review process should be followed strictly. It is not possible to eliminate all faults or avoid such errors but it is to improve the process by pursuing the efficient training of reviewers about how to evaluate the manuscript and to teach those principles and ethical guidance.

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