

# The significance of peer review in orthopaedic publications

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## Abstract

The purpose peer review is to enable authors to reach high & accepted standards during the dissemination of research data by the scrutinization of their research data by experts of the same field. Peer review also has its own share of demerits and points for criticism. Various new modifications have been proposed yet a more robust system is yet to be fully developed. It is expected that we make the most of this method to ensure that our fellow orthopaedicians get the most valid and filtered high-quality results from our research.

**Keywords:** Peer review, manuscript, orthopaedics, publications

### Peer-review and it's intent

Peer review has been defined as the process of scrutinizing the research or scholarly work of authors, by others who are experts in the same field [1] (In our instance, the Orthopaedic community). The purpose is to enable the authors to reach high & accepted standards during the dissemination of research data in order to avoid personal views, unacceptable results and unproven claims. Our hope is that a thorough discussion of the nuances of this system can help us raise awareness and thereby improve its utility with regards to manuscripts & publications submitted by authors from our region.

### The process of peer review

Peer review for orthopaedic manuscripts is conducted by orthopaedic experts and can range from the young surgeons to the old and experienced professors. Publishers and journals generally have large pools of reviewers from diverse backgrounds in order to avoid burnouts or delays. The Publishing Research Consortium (PRC) has revealed that normally a reviewer undertakes 8 reviews in a year [4]. Incentivising reviewers is critical although it is rarely paid. Some institutions incentivise reviewers with promotions [5]. The duration of time required to review a paper may vary from just 6 hours (on an average to more than hundreds of hours for complex and critical studies[6]. Reviewers first determine whether a manuscript has appropriate content or not. The next step is to determine the significance and originality of the work. Then comes the content. To increase chances the authors must ensure that they comply with the journals peer-review guidelines and policies.

### Advantages and Disadvantages

In open reviews, the authors, as well as the reviewers, are aware of each other's identity. In single-blind reviews, the reviewer's identity is unknown to the author, while in double-blind reviews neither the reviewer nor the author knows about each others identity. While open reviews have the advantage of preventing procrastination and malicious comments from the reviewer's side, it also discourages plagiarism from the author's side[7]. Open reviews, on the other hand, may prevent honest criticism out of fear of ruining relationships with superiors. Single-blind reviews, on the other hand, are most common and have the advantage of superior and more honest reviews without fear. But the disadvantage of the reviewer getting biased for maleficent reasons is worrisome. Double blinds peer reviews, on the other hand, prevent reviewer bias against the authors and ensure more honesty [7].

### Rejection by peer review

Manuscript rejection by reviewers is often painful to the authors. But inexperienced authors may take comfort from the fact that 62% of published papers were rejected at least once! Peer review means that almost all authors receive some form of criticism. Authors must find out the cause of rejection, whether outright or conditional. Outright rejections are helpful in appraising the authors either about the inappropriate choice of their target journal in relation to their research or prevent them from publishing fatally flawed research work!

When a conditional rejection is received, authors must try to make the necessary corrections, reapply the edited manuscript to the same journal, or pursue publication in a second choice journal after learning the shortcomings of their initial efforts.

### A helpful and efficient peer review

Peer review is a joint responsibility of both the authors as well as the editors/reviewers. Orthopaedic surgeons are expected to peer review the work of others as they expect their works to be reviewed by others. Papers not worthy of publications should not be taken a harsh view of



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but rather the authors be educated as to why the paper needs improvements and how the shortcomings can be overcome. Peer reviewers should focus on improving scientific knowledge as well as suggesting ways on improving the credibility of research rather than focusing on typographical or grammatical errors. The latter part is for professional proofreaders. The toughest part is probably sticking to time lines which immensely helps the journal as well as the authors. A structured review probably goes a long way to improve the quality of the authors material and makes future works more relevant and helpful. Guidelines for reviewers make the work of the reviewing easy. This is generally recommended by the orthopaedic journals or scientific associations as a credible means to standardize peer review.

### Recent developments

Peer review is seeing modifications and improvements over time. Presently it is moving towards post-publication peer review which takes place after the paper has been posted online<sup>2</sup>. Journals will then select papers that they find relevant based on the reviews and publish those that they deem appropriate. In this process, peer review and

individual journals are uncoupled [3]. Post-publication peer review is not intended to replace the normal process but rather augment it as an additional measure.

### Conclusion

Peer review has become an inalienable part in the process of selecting high quality, credible, scientific papers by editors of orthopaedic journals. This ensures the minimization of flaws, deficiencies and errors in literature reaching the orthopaedic surgeon, which have treatment consequences. Needless to admit that peer review has its own share of conflicts and deficiencies. But a more robust and foolproof system is yet to be accepted or developed. We must work in a cohort to ensure that this system is further strengthened and made full proof thereby enabling only high-quality research to reach the orthopaedic surgeons through our journal.

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