

Commentary: Paradigm shift in scientometric indices and publication policies of various ophthalmology journals

In this rapidly growing era of academic excellence and scientific publications, it is imperative to measure the impact and quality of articles, authors, institutions, and journals. This becomes important while selecting a journal for manuscript submission, measuring the impact of a publication, procuring grants, and assessing the reputation of a journal.^[1] Scientometrics, a subfield of infometrics, is one such field of study that measures and analyzes scholarly literature.^[2] It helps evaluate the impact of scientific manuscripts and journals, measure the citation count of articles, and utilize these measurements in formulating policies and management guidelines. The scientometrics indexes (SIs) consider an article's total citation count, but the manuscripts and citations taken into consideration can vary, and the calculation methods can differ.^[3] Thus, these SI are also known as quality indicators. Various SIs are available,

but the ones most commonly employed are journal impact factor (JIF), Hirsch index (h-index), i-10 index, scientific journal ranking (SJR), Eigen factor score (EF), Cite Score (CS), Source Normalized Impact per Paper (SNIP), and the Scientific Journal Ranking (SJR). JIF is one of the most common SIs used to classify scientific journals.^[4] The impact factor of any journal is a divisional factor of the number of citations of a particular article during a specified time period (e.g., 2 years) to that of the total number of articles published in that journal. Though most commonly used, unfortunately, JIF is a highly criticized SI due to various reasons. The h-index measures the quality and quantity of work published by an author, and the author has an h-index h if h of their x articles have received h citations each.^[5] But h-index is also criticized as it is affected by academic age and carries a bias toward seniority. The EF and SJR use various computational methods and assess the prestige of an article by a number of citations, also considering the source of citations. SNIP is another SI that is a part of the Scopus database and relies on the specialty-oriented difference in citation and measures the citation impact through contextual methods. SIs are vital for decision-making in every field of scientific research but with the limitation of none being the ideal one.

Apart from the scientific impact and merit of an academic journal and its paper, it is equally critical that a journal should have a wider reach and audience. A large readership can be another measure of its quality and impact. A wider audience can be reached when the full text of an article is available online to read, called an open access publication model or open-access platform.^[6] The benefits of a journal being open access are that it is peer-reviewed, attracts more citations than subscription-based academic journals, has a broader audience, has more scientific content dissemination, and is a good reference source for similar work. The disadvantages are high article-processing charges (APCs) and color page or image cost; moreover, some journals even demand submission charges before acceptance. There are various open access archives, such as gold, green, hybrid or dual-mode, diamond, eprint archive, abstract, author fee, partial open access, delayed, unqualified, per capita, libre, and gratis.^[7] The two major ones are full open access, which publishes all the articles as open access without any cost, and hybrid open access, which publishes an article with an APC.

The cumulative citation count and the number of articles published vary from journal to journal and with each medical specialty. A detailed literature review reveals similar analyses in the field of rheumatology, immunology, and hematology. This is probably the first one in ophthalmology, and the authors must be congratulated for the same. In the current study, the authors have holistically evaluated the bibliometric and scientometric data of 48 ophthalmology journals, which is highly commendable.^[8] The paper provides detailed insights, such as 25 journals publish all types of articles, which opens up a wide database for authors while selecting a journal for submission. In the open-access archives, 37 were hybrid and 10 were full open access, meaning many journals ask for APC, which may limit choices for authors. The paper also gives intricate insights regarding the cost of publishing, which varies from 900 to 5000 USD with a median of 3290 USD, which is considerably high for authors from the developing world. The authors found that four SIs had strong positive correlations; the highest correlation coefficients were observed between SJR and JIF (R: 0.906) and SJR and HI (R: 0.798). Another take-home message from the current study is that the OA articles published in journals with a hybrid OA received a median of 1.17-fold more citations as compared to all the articles. However, the range is wide-ranging from 0.15 to 2.71. Despite the OA publication policy's positive contribution to the SI, the hybrid model attracted more citations. Thus, in a nutshell, SIs should be cumulatively used to assess the impact of an article or a journal rather than a single SI such as JIF. More similar studies will be needed in the future to access the open-access platforms separately and in detail. The authors must be again congratulated for touching on this exciting concept.

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