



Editorial

Challenges of Open Respiratory Archives: Indexing and Impact Factor

Desafíos de Open Respiratory Archives: indexación y factor de impacto



It is commonly accepted that the road to academic recognition of a biomedical journal involves, at least, three well-established stages. The first one is to achieve indexing in major bibliographic databases with global scope, both specialized and multidisciplinary. In the case of specialized databases, Medline/PubMed and Embase are unquestionable, especially the first one, since it has been for a long time the most popular and exhaustive index of biomedical literature. In the case of multidisciplinary journals, Web of Science (WoS) and Scopus are the main sources and are especially important because they provide metrics on the scientific impact of the journals they index. While be included in both indicate of their quality and scope, WoS is the most influential because it was the first to include impact indicators based on citations, including the number of citations received by indexed papers and the impact factor (IF). In addition, it ranks the journals in each area or thematic specialty by dividing the number of journals ordered by their impact factor into four parts or quartiles, each including the same number of journals.¹ For all these reasons, WoS has achieved the status of “authority” in the identification of high-impact journals worldwide.²

The second stage involves ensuring that the published articles obtain enough citations for the journal to attain the best impact indicators. The need for objective measures of journal quality led to the introduction and popularization of the IF as an indirect measure of this quality. The IF is calculated for each journal by establishing the relationship between the citations received in one year by articles published in the previous two years and the total number of articles published in the journal during those two years.³ The IF has been widely criticized and has given rise to numerous controversies in the scientific community. This criticism stems from several factors that can bias its calculation, including coverage issues, the measurement of short-term citations, the oversight of important research with long-term impact, the linguistic preferences of the database, the procedures used to collect citations, the negative citations, editorial preferences for specific types of articles, the different citation behaviors across various fields, and the potential influence of editors on citation practices.^{4,5} In addition, its inappropriate use has been emphasized in the evaluation of articles and individual scientists. However, as a general rule, journals with high IF are the most prestigious. This has inevitably led to the perception among researchers that prestige is equivalent to IF, and publishing in journals with a high IF is an implicit indicator of prestige.² However, this is not necessarily the case. In some journals, only a few highly

cited articles contribute to the high IF, while the rest may be poorly cited. Therefore, it is necessary to emphasize that the IF is an indicator of journal quality and is not statistically representative for individual articles. Moreover, due to the different citation practices among scientific areas, it is not appropriate to compare journals in different fields on the basis of their impact factors.⁶

The third stage is to ensure that, thanks to the citations received, the journal is placed in the best positions in the rankings of journals in its specialty. Therefore, the greatest challenge for a journal is to position itself in the upper quartiles, in the first quartile, if possible.

Once indexing and the impact factor have been achieved, survival and promotion in the rankings are directly related to editorial rigor and persistent efforts of the members of the editorial board (EBM), compliance with ethical standards and the body of reviewers in consistently maintaining and enhancing the quality of manuscripts. This is also connected with transparent publication policies and efforts to attract readers and researchers. At the same time, it is essential to adapt the journal's website to the continuous innovations of the Internet. This includes content distribution systems and alerts to potential readers, conversion into computer-readable formats for database capture, bibliographic reference managers and repositories, adaptation to new reading devices, such as cell phones and tablets, and promotion on both academic and popular social networks.

Additionally, another advantage of indexing a journal in databases is that it places its contents in the context of worldwide research in the specialty. This facilitates the identification of topics of special relevance or “hot” topics, as well as gaps in research. Likewise, WoS and Scopus will display the relationships of Open Respiratory Archives' indexed papers with others through citations, and those of thematically related papers through keyword matching. Modern visualization systems, some of them integrated into the databases themselves, enable the generation of graphical concept maps that illustrate these associations.

Equally important is the information related to a new range of usage indicators known as altmetrics. WoS provides the Usage count for each article, indicating the number of times a user has clicked on links to the full article on the publisher's website or has saved the article for use in a bibliographic reference manager. Scopus, for its part, through the PlumX tool, offers several indicators classified into five categories: Usage (Clicks, Downloads, Views, Library Holdings and Plays); Captures (Bookmarks, Code Forks, Favorites, Readers and Watchers); Mentions (Blog posts,

News mentions, Comments, Reviews and Wikipedia Links); social media (Likes, Shares and Tweets). It is needless to emphasize the importance of all this information for everyone involved in the scientific communication process: editors, researchers and funding agencies for decision-making.

Despite the importance of indexing and having an impact factor, Open Respiratory Archives should not lose sight of the fact that its mission is to discover, develop and disseminate research findings based on the quality of scientific evidence for the prevention and treatment of respiratory diseases. In the end, it is the quality of the research and not the impact factor that will prevail in the credibility of researchers and what will really impact patients. The EBM of Open Respiratory Archives plays a key role in ensuring the quality of the journal and some studies have shown the relationship between the EBM and the journal's position in rankings,⁷ especially regarding the h-index, the number of publications, the average citations per paper and the low self-citation rate of each of the EBMs.

Non-indexing in databases limits the reputation of the journals, as they become immersed in a vicious circle of low visibility that leads to a lack of attraction for high-quality articles, which in turn contributes to their remaining unattractive. Although this drawback has been partly overcome thanks to the online availability of most journals and their harvesting by metasearch engines such as Google Scholar, OAlster, BASE, Dimensions and similar resources,⁸ researchers and academic institutions still consider indexing in databases like WoS as the gold standard for journal quality, since they require compliance with rigorous criteria as requirements for indexing.

In conclusion, when faced with the dilemma of determining the criterion for considering a journal to be of high quality, whether indexing or impact factor, we can affirm that both options are necessary and complementary. However, indexing prevails and allows for an increase in impact. Nowadays, indexing in digital bibliographic platforms enables effective dissemination of knowledge, contributing to the advancement of science and the improvement of people's health.

Funding

This work has not received funding.

Authors' contributions

The authors have contributed equally to the drafting, writing, review and final approval.

Conflicts of interest

There is no conflict of interest in this work.

References

1. Prancutè R. Web of Science (WoS) and scopus: the titans of bibliographic information in today's academic world. *Publications*. 2021;9:12, <http://dx.doi.org/10.3390/publications9010012>.
2. Chavarro D, Rafols I, Tang P. To what extent is inclusion in the Web of Science an indicator of journal 'quality'? *Res Eval*. 2018;106–18, <http://dx.doi.org/10.1093/reseval/rvy001>.
3. Aleixandre-Benavent R, Ferrer-Sapena A, Peset-Mancebo F. El factor de impacto bibliográfico. *FMC*. 2010;17:714–5, [http://dx.doi.org/10.1016/S1134-2072\(10\)70285-1](http://dx.doi.org/10.1016/S1134-2072(10)70285-1).
4. de Granda-Orive JI, Aleixandre Benavent R, Villanueva Serrano S. Impact factor: what having one means to a scientific journal. *Arch Bronconeumol*. 2005;41:404–5, <http://dx.doi.org/10.1157/13076975>.
5. Balhara YP. Indexed journal: what does it mean? *Lung India*. 2012;29:193, <http://dx.doi.org/10.4103/0970-2113.95345>.
6. Zhu J, Liu W. A tale of two databases: the use of Web of Science and Scopus in academic papers. *Scientometrics*. 2020;123:321–5, <http://dx.doi.org/10.1007/s11192-020-03387-8>.
7. Asnafi S, Gunderson T, McDonald RJ, Kallmes DF. Association of h-index of editorial board members and impact factor among radiology journals. *Acad Radiol*. 2017;24:119–23, <http://dx.doi.org/10.1016/j.acra.2016.11.005>.
8. Harzing AW, Alakangas S. Google Scholar Scopus and the Web of Science: a longitudinal and cross-disciplinary comparison. *Scientometrics*. 2016;106:787–804, <http://dx.doi.org/10.1007/s11192-015-1798-9>.

Adolfo Alonso-Arroyo^{a,b,*}, José Ignacio de Granda-Orive^c,
Rafael Aleixandre-Benavent^{b,d}

^a *History of Science and Documentation Department, University of Valencia, Spain*

^b *UISYS Research Unit, INAEU Institute, Valencia, Spain*

^c *Pneumologist, 12 de Octubre University Hospital, Complutense University of Madrid, Spain*

^d *Ingenio (CSIC-Polytechnic University of Valencia), Spain*

* Corresponding author.

E-mail address: adolfo.alonso@uv.es (A. Alonso-Arroyo).