ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

https://sajhealthsci.com

South Asian Journal of Health Sciences

Guest editorial

Birth of new journals and their quality assessment

Premanath Fakirayya Kotur[1], Pushpa Premanath Kotur[2]

Departments of [1]Anesthesiology and [2]Obstetrics & Gynecology, Aarupadai Veedu Medical College and Hospital, Vinayaka Mission's Research Foundation-DU, Kirumammpakkam, Puducherry, India.

***Corresponding author:**
Prof. Premanath Fakirayya Kotur,
Department of Anaesthesiology, Aarupadai Veedu Medical College and Hospital, Vinayaka Mission's Research Foundation-DU, Kirumammpakkam, Puducherry, India.

profkotur@gmail.com

Received: 05 December 2023
Accepted: 07 December 2023
Published: 28 December 2023

DOI
10.25259/SAJHS_23_2023

Quick Response Code:

Research is quite essential for the growth and development of any specialty, and scientific journals serve as platforms for researchers, clinicians and scholars to translate their research findings into practice for the benefit of the community.

With the advent of digital technologies and also keeping pace with the phenomena of globalisation and democratisation of scientific publishing, the traditional print model journals have been transformed into newer models of publications viz. Open Access model or hybrid model. There are numerous health science journals (of all models together) covering a wide range of topics within the field of health science. It's difficult to provide an exact number of health science journals in India or globally because new journals are born every year, and existing ones may undergo modifications or become extinct in the world of publication. As per a survey, as of 2020, the number of journals publishing scientific articles worldwide was found to be 46,500 (30,000 of these journals were classified under Medicine and Health), which was 1.07% more compared to 2019.[1] Over the last 10 years, the number of academic journals has grown by 28.7%, growing at an average rate of 2.56% every year.[2] That means more than 1100 new journals are born every year.

In spite of the availability of the aforementioned number of journals and a vast array of facilitations for publishing in today's digital world, the authors continue to face an unprecedented challenge in selecting a scientific journal to publish their research work so as to reach a wider audience.

WHY ARE NEW JOURNALS BORN?

Let us restrict our discussion to health science research; with increased emphasis given to research at all levels, exaggerated and accelerated research activities are going on in all higher educational institutions across the country. The research output of the faculty member is considered the most important tool for measuring the professional development of an individual, and the research publications have been made mandatory for all PG medical students as eligibility criteria to appear for examinations by the regulating bodies. Therefore, a voluminous number of scientific articles are being generated by the faculty members seeking hierarchical promotions and also by PG students waiting to appear for their examinations. Such voluminous data waiting to get published, can be one of the prime reasons for the birth of new journals. Other important reasons as to why new journals continue to be born in India are: 1) The number of higher education institutions (HEIs), including health science universities and colleges has quadrupled since independence and because of stringent regulations imposed by the government to maintain a high grade of accreditation and national ranking status, universities are rather forced to promote, support, strengthen research and publish their research output in the form of publications. 2) Amongst

various criteria considered for the accreditation or ranking of the HEIs, the research output of an institution gets maximum weightage in the grading system as compared to other factors, viz. teaching and learning, curricular aspects, infrastructure, governance, etc.,[3] thereby making every other university or college to float a journal of its own. 3) Due to the phenomena of globalisation, internationalisation and privatisation of education, the competition amongst the institutions to excel is very intense. Hence, scientific journals are continually being born as researchers and institutions seek to disseminate their new findings and contribute to the scholarly discourse, and the institutions showcase their academic/research capabilities to attract more and more students.

Once a journal is born, it is the duty of all the stakeholders to nurture it until the journal earns credibility and popularity, and stands on its own. The single most important determinant of the survival of a journal is its quality.

HOW IS THE QUALITY OF A JOURNAL ASSESSED?

Assessment of the research and researchers, especially in a research-intensive environment, is a daunting task and has to rely on various indicators, like the Journal Impact Factor (JIF) and similar other indices, as substitutes for quality in research.

The quality of a journal is assessed through the following criteria, which are considered by ardent researchers, most of the time, while deciding which journal to submit their articles to:[2]

1. **Peer-Review Process:** Journals with a rigorous and transparent peer-review process are always preferred. The process of peer review, which is essentially confidential, obviously involves experts in the field to evaluate the quality, validity and significance of the submitted manuscripts before they are considered for publication.
2. **Impact Factor:** The impact factor is a metric that reflects the average number of citations received by articles in a journal over a specific time period. Journals with higher impact factors are generally preferred by everyone in their field. However, it's essential to note that the impact factor has its limitations and cannot be considered the sole indicator of a journal's quality.
3. **Indexing and Abstracting Services:** Being indexed in reputed, time-tested databases, such as PubMed, Scopus, Web of Science, etc., enhances the credibility of a journal. Inclusion in these databases also increases the visibility and accessibility of the published articles in the journal.
4. **Editorial Board:** The credibility of the editors, editorial board members, and peer reviewers of the journal can impact the overall quality of the journal.
5. **Open Access Policies:** The transparency and open access policy of the journal also contributes to its quality. It is essential to know that open-access journals, though they make the published content widely visible, may bring down the quality of the journal by freely distributing the non-peer-reviewed content.
6. **Journal Reputation:** The regularity, punctuality, frequency, consistency, appearance, and quality of the paper and printing, apart from the rich updated scientific content, can enhance the reputation and standing of the journal in the community and thereby determine the overall quality of the journal. Researchers often discuss the quality of a journal with their peers and prefer to publish in journals that are well rated by their peers.
7. **Publication Ethics:** Journals that follow ICMJE (International Committee for Medical Journal Editors) or COPE (Committee on Publication Ethics) to define their own guidelines, as regards issues related to authorship, the peer review process, plagiarism checks, conflict of interest disclosures, and the ethical standards etc., are considered more trustworthy.
8. **Scope and Focus:** Journals with an explicit scope and aim/goal are often preferred by the authors.
9. **Availability of Metrics:** Beyond the IF, other metrics such as Citation Score, h-index, and altmetrics (social media and online attention) can provide valuable information about the journal.

IMPACT FACTOR (IF). THE MISNAMED, MISLEADING AND MISUSED METRIC OF SCIENTIFIC LITERATURE

IF was first introduced by Eugene Garfield, in 1955,[4,5] as a measure of the quality of a journal. It was proposed as a useful tool for librarians to choose journals for purchase in their libraries, for professionals to buy personal copies of journals for their reading, and for scientific journal editors to plan their editorial strategies. It is well known that the IF – arguably the single most important determinant for assessing the quality of a journal – is vulnerable to all sorts of manipulations even today.[1] The impact factor can, for instance, be manipulated by publishing large numbers of so-called non-citable articles. Manipulation is also possible by publishing editorials with multiple self-citations to recently published papers[6,7,8] or by participating in citation mafias.[9] Another source of manipulation that received considerable attention lately is that of coercive journal self-citation.[10,11] Because of its vulnerability to manipulation, the IF started getting misused and got branded wrongly as a putative index of the scientific production of a single author. Due to this reason, it earned the title of 'the misnamed, misleading and misused measure of scientific literature'[12] and senior scientists in the country

have cautioned that misuse of IF could lead to extremely misleading conclusions.[13]

Journals' IFs differ from discipline to discipline and reflect the citation rate of the average article in a journal and not any specific article. IF averages over all articles and thus underestimates the citations of the most cited articles, while exaggerating the number of citations of the majority of the articles. Many parameters influence the citation rate of a particular journal's articles and, therefore, its IF. These include the visibility and size of the circulation of the journal, including the availability of electronic formats and options for online search and retrieval. Other things to consider are editorial standards, especially rapid and effective peer reviewing, and the time lag between acceptance and appearance in print. The number of self-citations and citation density (the ratio of references to articles) and also the inclusion of many review articles containing hundreds of references to recently published articles, boost IF. Other properties of a medical journal that can be assessed include: total circulation; readership numbers and surveys; quality of the editorial board, staff, and peer reviewers; rejection rate of the journal and turnaround time; the number of paid subscribers; advertising revenue; listing on Medline and other databases; international distribution; cost to the reader; and page or peer-review charges to the author.[14,15]

Hansson (1995) noted that it is difficult to publish a clinical study fast enough to reward the source article with a citation within two years, and he proposed that the IF be rejected as a guide to quality, as the IF undermines clinical journals as less important.[16]

DECLARATION ON RESEARCH ASSESSMENT (DORA)

DORA is a global initiative to support the development and promotion of best practices for the assessment of research publications.[17] It is a set of recommendations and principles developed to address concerns and limitations associated with the use of metrics, in particular the Impact Factor, in the evaluation of research and researchers. It was initiated during the Annual Meeting of the American Society for Cell Biology (ASCB) in 2012 in San Francisco, USA. The primary goal of DORA was to promote the correct use of research metrics and to encourage a more meaningful method of assessing the quality of scholarly publications. The declaration emphasises the need for the research community to move away from overreliance on journal-based metrics, viz. the Impact Factor and to consider a more meaningful, comprehensive set of aforesaid criteria when evaluating research and researchers. To date (13 November 2019), 1,557 organisations and 15,006 individuals are signatories to DORA. These include funders, publishers, professional societies, institutions and researchers.

EUROPEAN COMMISSION AGREEMENT ON REFORMING RESEARCH ASSESSMENT

It is the strong commitment and endorsement of the DORA by the European research funding agency that sets recommendations to improve the evaluation of researchers and the outputs of scholarly research.[18] It is certainly a step towards the reform of research assessment practices. An agreement was officially announced for signature during the European Research & Innovation Day in July 2022. It is the result of a co-creation process involving more than 350 organisations from 50 countries. More than 100 signatories from 25 countries, as well as European and global organisations, have already signed the agreement, and this number is continuing to grow.

FINAL WORD

Newer scientific journals continue to be born to cater to the present-day needs of society and it is the duty of all the stakeholders to support the journal until it becomes stable and sustains on its own. IF has one specific purpose: it is a clear metric of the extent to which a given journal functions as a connector for researchers in a specific field. Authors should submit their articles to journals that are easily available and are read by most of their peers and should not bother about the IF.

REFERENCES

1. https:// WordsRated.com Number of Academic Papers Published Per Year – June 1, 2023
2. Amy M. Suiter, MLS and Cathy C. Sarli, MLS, Selecting a journal for publication: Criteria to Consider Mo Med 2019;116: 461–5.
3. http://.www.naac.gov.in>manuels. National Assessment and Accreditation Council (NAAC), Manual of Health Sciences for Universities (Revised Accreditation Framework - Applicable for all cycles and for Re-Assessment) Manual of Health Sciences for Universities revised on 23/09/2019
4. Garfield, E., Citation indexes for science: A new dimension in documentation through association of ideas. Science 1955;122:103–11
5. Garfield E. Citation analysis as a tool in journal evaluation. Science 1972;178:471–9.
6. Caspar Chorus, Ludo Waltman. A large-scale analysis of impact factor biased journal self-citations PLOS ONE | doi: 10.1371/journal.pone.0161021 August 25, 2016
7. Moed HF, Van Leeuwen TN. Impact factors can mislead. Nature 1996;381:186. PMID: 8622752
8. PLoS Medicine Editors. The impact factor game. PLOS Medicine 2006;3:e291. PMID: 16749869
9. Davis P. The emergence of a citation cartel. 2012. Available: http://scholarlykitchen.sspnet.org/2012/04/10/emergence-of-a-citation-cartel/
10. Mahian O, Wongwises S. Is it ethical for journals to request self-citation? Science and Engineering Ethics 2015;21:531–3.

11. Smith R. Journal accused of manipulating impact factor. BMJ 1997;314:461. PMID: 9056791
12. Kotur PF. Impact factor — the misnamed, misleading, and misused measure of scientific literature. Curr Sci 2013;105:289.
13. Balaram P. Editorial: Research assessment, declaring war on the impact factor. Curr Sci 2013; 104:1267–8.
14. Jones AW. Impactfactors of forensic science and toxicology journals: What do the numbers really mean? Forensic Sci Int 2003;133:1–8.
15. George Lundberg Editorials the "omnipotent" Science Citation Index Impact Factor. MJA 2003; 178:253–4.
16. Hansson, S. Impact factor as a misleading tool in evaluation of medical journals. The Lancet 1995;346:906.
17. Jordan W. Raff (Editor-in-Chief), The San Francisco Declaration on Research Assessment Biology: 2013, 2, Open 533–4, doi: 10.1242/bio.20135330 Published by The Company of Biologists Ltd.
18. Agreement on Reforming research assessment: European Union, 3 October 2022. https://research-and-innovation.ec.europa.eu/

How to cite this article: Kotur PF, Kotur PP. Birth of new journal and their quality assessment. South Asian J Health Sci. 2024;1:2–5. doi: 10.25259/SAJHS_23_2023