EDITORIAL

The Journal Impact Factor- Does it reflect the quality of a journal?

Fatema Jawad

"Not everything that can be counted counts, and not everything that counts can be counted," is a famous saying by Albert Einstein. This quote has a very deep and hidden meaning. How does this apply to the journal metrics in our world.

For the past 75 years scientific journals have been evaluated by compiling Science Citation Index, Social Science Citation Index, and Arts and Humanities Citation Index and publishing Journal Citation Reports by Clarivate Analytics.[1] previously by Thomson Reuters. Journals are judged by their citation rate, which is known as the Journal Impact Factor (JIF) and can be calculated as the mean citation rate of the articles published in the journal in a given year.

Impact Factor was first developed by Eugene Garfield, a chemist and librarian to evaluate journals more so for purchasing them for the library.[2] He was also the founder of the Institute for Scientific Information(ISI).

The JIF was initially intended for comparison of the frequency of citations of articles in a year. But this was later misinterpreted by journal owners and publishers by making these journals so prestigious to become unreachable to authors by having a high rejection rate.[3]

Hoeffel in 1998 stated that "Experience has shown that in each specialty the best journals are those in which it is most difficult to have an article accepted, and these are the journals that have a high impact factor."[4]

Like any other tool, the Impact Factor has also been frequently misused in all fields. Promotion and service contracts have been influenced by the IF of journals used by authors for publishing their articles and publishers have taken advantage of the journal's reputation to increase subscriptions.[5]

It was some time back that we had a phone call in our journal office asking if JPMA was indexed with Pubmed and Scopus. The next question was, "What is the Impact Factor? This question was put up as the prospective author was asked to publish the article in an indexed journal with a big IF for promotion purposes.

We were wondering if these pre-conditions for publishing articles as requirements for promotion in service are justified in our country? How can the author find such a journal in Pakistan? If h/s submits the article to NEJM or JAMA, will the article be considered? Does the standard of the research in our country meet their level? This gave us food for thought as to why our metrics as JIF, Journal Citation Rates, Citing Half-life Data, Journal In-cites and the Hirsch Index are not comparable to journals from other regions. Discussions amongst ourselves and some experts provided the probable reply. To raise the IF of any journal, small studies, case reports, KAP studies and, Letters should be rejected. Only Systematic reviews, RCTs and Original Articles should be considered as these are cited frequently.

If every journal in Pakistan, including the few indexed and leading ones adopt this policy, where will most authors of the country publish? With the growing number of medical colleges and universities in the country, which amounts to a larger pool of faculty members requiring publications for promotion and more post-graduate and undergraduate students, aspiring to go abroad, the number of articles for submission to journals have risen tremendously. Not all articles can be RCTs or Case Control studies or even Systematic reviews due to the known fact that such research requires a good amount of funding and more time. Both are not readily available. Why are such conditions laid down by our authorities as publish in a high IF Journal? It should be an Original Article! In reality, a Research Article can be equally important as an Original Article. Regretfully, as experience has shown, that members of these governing bodies as Pakistan Medical and Dental Council and Higher Education Commission cannot differentiate between an Original article and a Research article. Easily available are the guidelines from the Equator Network which can be freely accessed and provide the details of articles of every category. Justice to publications is the need of the day.

Eugene Garfield, the inventor of the JIF also stated, "The use of journal impacts in evaluating individuals has its

Editor-in-Chief, Journal of Pakistan Medical Association, Karachi, Pakistan.
Correspondence: Fatema Jawad. e-mail: editor@jpma.org.pk

inherent dangers. In an ideal world, evaluators would read each article and make personal judgments".[2] In my opinion, the word "WOULD" should be replaced by SHOULD at least for our country.

The Journal Impact Factor can be used to compare the quality and standard of journals of the same discipline. It is well known that it is not the perfect tool and can be misleading.[6] At times it is mis-used for evaluating the journal and also the authors. Funding sources can be influenced when authors publish in High Impact Factor journals. Occasionally, careers are built on the standard of journals used for publishing research articles.

It has also been observed that there may be a few highly cited articles in a journal with many more not cited at all. Sub-specialty journals as those of Biochemistry or molecular biology or genetics may have a higher impact factor as the mean citation rate of all the articles can be higher. Journals have also learnt the devices to increase the JIF by publishing many Review articles which are likely to be cited more. Policies have been changed by editors to refuse publication of Case reports and Letters as these are not included in the JIF calculation by Clarivate Analytics.

To safe guard scientific research and publication, the International Committee of Medical Journal Editors (ICMJE) has updated (21. December, 2018) the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals, which are followed by hundreds of biomedical journals. The main changes are meaningful and include issues regarding journal metrics besides others.[7]

"The ICMJE clearly recommends that journals reduce the emphasis on impact factors as a single measure of a journal's quality. This is in accordance with the DORA DECLARATION which advocates that journal-based metrics should not be used as a surrogate measure of the quality of individual research articles, scientific productivity or as the only journal performance metric".[7]

The UK EQUATOR Centre is a signatory of DORA besides 1562 Organizations (inclusive of JPMA) and 14690 individuals

As stressed by ICMJE,[8] "the importance of the DORA Declaration (The San Francisco Declaration on Research Assessment)[7] is evident from the fact that the Impact Factor is frequently (mis)used as the primary parameter to compare the scientific output of individual researchers and to measure the quality of a journal. However, impact factor has a number of deficiencies, including the fact that the data used to calculate it are not transparent nor publicly available. As there are several other ways to measure scientific output, the adoption of only one method by editors and funders is clearly biased."

An author should not be enamoured just by the impact factor of a journal because all that glitters is not gold. The JIF does not entirely reflect on the quality of a journal. One should have the ability to judge a publication accurately on its own merit. Biomedical journals of developing countries, where resources are scarce and opportunities are inadequate, should not just concentrate on raising their own metrics at the cost of rejecting small research of a good quality. The disappointed authors are then caught in the trap of predatory journals. Work has to be done on all aspects as training supervisors to teach ethical research, analyzing it correctly and writing it well to be accepted by any national or international journal. It is not impossible, if we have the will and consider it our responsibility.

References

1. https://clarivate.com/products/journal-citation-reports/ cited on 10. August, 2019.
2. Garfield E. The history and meaning of the journal impact factor. JAMA 2006; 295: 90-93.
3. Pringle J. 2008. Trends in the use of ISI citation databases for evaluation. Learned Publishing.2008; 21:85-91. Available to UT faculty, staff, and students through the UT Libraries' catalog at http://utmost.cl.utoledo.edu/record=b2593314.
4. Garfield E. Use of Journal Citation Reports and Journal Performance Indicators in measuring short and long term journal impact. Croat Med J. 2008; 41:368-374. Available at http://www.cmj.hr/2000/41/4/01.pdf.
5. Roeser, RJ. The use and misuse of 'America' and the JCR impact factor. INT J AUDIOL. 2007; 46: 553. Available to UT faculty, staff, and students through the UT Libraries' catalog at http://utmost.cl.utoledo.edu/record=b2593314.
6. Amita K, Shankar SV. Impact Factor as a Journal Evaluation Tool and its Impact. J Med Sci Health. 2016; 2:1-4.
7. San Francisco Declaration on Research Assessment Available at https://sfdora.org/ cited on 10. August 2019.
8. New ICMJE Recommendations published. Available at: http://www.icmje.org/ icmje-recommendations.pdf cited on 10. August, 2019.