

Take Care of Journal with Fake Impact Factor

Haider S. Kadhim *MBChB, PhD*

Dept. of Microbiology, College of Medicine, Al-Nahrain University, Baghdad, Iraq

The importance of impact factor (IF) came from its use as an indicator for journal as having high scientific value in comparison to non-impact factor journal. Unfortunately none of our Iraqi journals have IF, hope to get IF for our journal in near future. Still there is a conflict of doing high scientific value researches and publishing in an average IF journal with all of costs and payments. Here I would to focus on the importance of IF, mainly with the help of Wikipedia, the free encyclopedia and another important website namely, science editing and publishing (<http://sci-edit.net>) of how to get information about the IF and how to know journals with IF.

The IF of an academic journal is a measure that reflects the average number of citations to recent articles published in that journal. It is frequently used to know the relative importance of a journal within its field, as journals with higher impact factors consider to be more important than those with lower ones. The IF was devised by Eugene Garfield, the founder of the Institute for Scientific Information. IFs are calculated yearly starting from the year 1975 for those journals that are indexed in the *Journal Citation Reports* (JCR).

Calculation

The IF of a journal, in any given year, is the average number of citations received per paper published in that journal during the two preceding years⁽¹⁾. For example, if a journal has

an impact factor of 3 in 2008, then its papers published in 2006 and 2007 received 3 citations each on average in 2008. The 2008 impact factor of a journal would be calculated as follows:

A = the number of times that articles published in that journal in 2006 and 2007, were cited by articles in indexed journals during 2008.

B = the total number of "citable items" published by that journal in 2006 and 2007. ("Citable items" are usually articles, reviews, proceedings, or notes; not editorials or letters to the editor). 2008 impact factor = A/B .

New journals, which are indexed from their first published issue, will receive an IF after two years of indexing; in this case, the citations to the year prior to Volume 1, and the number of articles published in the year prior to Volume 1 are known zero values. Journals that are indexed starting with a volume other than the first volume will not get an IF until they have been indexed for three years. Annuals and other irregular publications sometimes publish no items in a particular year, affecting the count. The IF relates to a specific time period; it is possible to calculate it for any desired period, and the JCR also includes a five-year IF⁽²⁾. The JCR shows rankings of journals by IF, if desired by discipline, such as organic chemistry or psychiatry.

Use

The IF is used to compare different journals within a certain field. The ISI Web of Knowledge indexes more than 11,000 science and social science journals^(3,4).

Validity as a measure of importance

The IF is highly dependent on the academic discipline, possibly on the speed with which papers get cited in a field. The percentage of total citations occurring in the first two years after publication varies highly among disciplines from 1-3% in the mathematical and physical sciences to 5-8% in the biological sciences⁽⁵⁻⁷⁾. Thus, IFs cannot be used to compare journals across disciplines.

The IF is based on the arithmetic mean number of citations per paper, yet citation counts follow a Bradford distribution (i.e., a power law distribution) and therefore the arithmetic mean is a statistically inappropriate measure⁽⁸⁾. For example, about 90% of *Nature's* 2004 IF was based on only a quarter of its publications, and thus the importance of any one publication will be different from, and in most cases less than, the overall number⁽⁹⁾. Furthermore, the strength of the relationship between IFs of journals and the citation rates of the papers therein has been steadily decreasing since articles began to be available digitally⁽¹⁰⁾.

This problem was exacerbated when the use of IFs is extended to evaluate not only the journals, but the papers therein. The Higher Education Funding Council for England was urged by the House of Commons Science and Technology Select Committee to remind Research Assessment Exercise panels that are obliged to assess the quality of the content of individual articles, not the reputation of the journal in which they are published⁽¹¹⁾. The effect of outliers can be seen in the case of the article "A short history of SHELX", which included this sentence: "This paper could serve as a general literature citation when one or more of the open-source SHELX programs (and the Bruker AXS version SHELXTL) are employed in the course of a crystal-structure determination".

This article received more than 6,600 citations. As a consequence, the IF of the journal *Acta Crystallographica Section A* rose from 2.051 in 2008 to 49.926 in 2009, more than *Nature* (at 31.434) and *Science* (at 28.103)⁽¹²⁾. The second-most cited article in *Acta Crystallographica Section A* in 2008 only had 28 citations⁽¹³⁾.

Finally, journal rankings constructed based solely on IFs only moderately correlate with those compiled from the results of expert surveys⁽¹⁴⁾.

It is important to note that IF is a journal metric and should not be used to assess individual researchers or institutions^(15,16).

Take care of fake impact factors

There are more than 20000 Journals showing FAKE IMPACT FACTOR on their site. Be aware of them. So how to know, if Impact Factor of certain journal is Fake:

1. Visit SCI site <http://ip-science.thomsonreuters.com/mjl/>
2. Enter title of the journal in Search. If it is indexed it will appear. Click on coverage, if it says "Science Citation Index" it means the journal is covered and has some IF that you cannot see unless you buy their "Journal Citation Report". If journal does not appear in list means it is not indexed with them, still the journal site says some IF, and no doubt it was fake one. Stay away from these journals if you think your research work has some quality.

So IF of journals will appear, at least 3 years later after publishing at least 5-6 issues consistently, however, getting indexed in SCI is not easy they demand very high quality in publication⁽¹⁷⁾.

References

1. Introducing the Impact Factor. Retrieved 2009-08-26.
2. JCR with Eigenfactor. Retrieved 2009-08-26.
3. Web of Knowledge > Real Facts > Quality and Quantity". Retrieved 2010-05-05.
4. Thomson Reuters Master Journal List. Thomson Reuters. Retrieved 2013-06-20.
5. Rossner M, Van Epps H, Hill E. Show me the data. *J Cell Biol* 2007; 179(6):1091-2.
6. European Association of Science Editors (EASE) Statement on Inappropriate Use of Impact Factors. Retrieved 2012-07-23.

7. Nierop E. Why Do Statistics Journals Have Low Impact Factors? *Statistica Neerlandica* 2009; 63(1):52-62.
8. Joint Committee on Quantitative Assessment of Research. Citation Statistics (PDF). International Mathematical Union (12 June 2008).
9. Not-so-deep impact. *Nature* 2005; 435 (7045):1003-1004.
10. George LA, Vincent L, Yves G. The weakening relationship between the impact factor and papers' citations in the digital age. *J Am Soc Inform Sci Technol* 2012; 63(11):2140.
11. Bob G. New impact factors yield surprises. *The Scientist* 2010. Retrieved 31 March 2011.
12. What does it mean to be #2 in Impact?, Thomson Reuters Community.
13. Serenko A, Dohan M. Comparing the expert survey and citation impact journal ranking methods: Example from the field of Artificial Intelligence. *J Inform* 2011; 5(4):629-648.
14. Seglen PO. Why the impact factor of journals should not be used for evaluating research. *BMJ* 1997; 314(7079):498-502.
15. *EASE Statement on Inappropriate Use of Impact Factors*. European Association of Science Editors. November 2007. Retrieved 2013-04-13.
16. <http://sci-edit.net/journals/impactfactor.pdf>. Retrieved 2014-03-14.