EDITORIAL

THERE IS A NEED FOR IMPACT FACTOR FOR LOCAL JOURNALS

Eugene Garfield of Institute of Scientific Information (ISI) of Philadelphia, USA introduced Journal Impact Factor (IF) in 1960. The impact factor is calculated every year from 17000 science and social sciences journals indexed by ISI. The calculation of Impact factor is based upon citation of various papers published by that journal during the two previous years. It indicates how many times the papers published in a journal are cited by others in their articles [1].

For example, the 2005 impact factor for a journal can be calculated as follows:

- The number of articles published in a journal during 2003 and 2004, which were cited in all ISI indexed journals during 2005.
- The total number of articles, reviews, proceedings or notes published in the same journal during 2003 to 2004.

The IF of the journal for 2005 will be = A/B.

The impact factors and indices are published in Journal of Citation Reports (JCR) every year [2]. The IF of some of these journals out of 6088 journals publish in 2005 are shown in the table.

The IF is the gauge of the quality of various journals. Higher the impact factor, greater is the prestige of that journal. IF provides quantitative tool for ranking, evaluating, categorizing, and comparing various journals. The most important application of IF is its weightage in academic appointments. IF has a huge, but controversial, influence on the way published scientific research is perceived and evaluated [3].

There is a lot of controversy regarding IF. The opponents of IF argue that few non-English journals are indexed by ISI. Delay in processing of an article causes outdating of research therefore less citation. Journals containing more review articles have greater citation, therefore higher impact factor. Others complain that the temporal window for citation is too short, therefore classic articles cited frequently even after several decades are not included in the citation, thus does not affect the IF of that journal. Example of super-citation classic includes the Lowry method [4] cited 300,000 times. Furthermore self citation is encouraged by editors to improve the IF of that journal [5].

As evident from the table no biomedical journal of Pakistan has any IF and therefore cannot be compared with any international journals. Ideally the local journals should try to get in themselves indexed with ISI and acquire an impact factor [6]. This seems very difficult at present. Currently 36 biomedical journals are recognized by Pakistan Medical and Dental Council (PMDC) and they give equal importance to all of them. This is not fair as some of these journals are of very high standards and indexed in Index Medicus, whereas others have variable standards. Therefore we must devise a system similar to IF for local biomedical journals so that authors publishing in better journals may be given preference over those who get their

Table: Impact factor of some of international journals and the only two Pakistani journals, which have an impact factor.

Journal Title	2005 Impact Factor
Annual review of Immunology	52.4
New England journal of Medicine	38.6
Nature Reviews: Cancer	36.6
Physiological reviews	33.9
Nature	32.2
Science	31.9
Nature Medicine	31.2
Cell	28.4
JAMA	24.8
Nature Genetics	24.7
Pharmacological Reviews	22.8
Lancet	21.7
Annals of Internal medicine	13.1
BMJ	7.0
J chemical society of Pakistan	0.194
Pakistan journal of Botany	0.153

papers published in low standard journals. There are a number of institutions which can take this responsibility, like Higher education Commission of Pakistan, PMDC or College of Physicians and Surgeons Pakistan. Similarly others measures of impact can also be calculated, like Citation index, which shows the number of times an article is cited by others and H-index, which is an impact factor of individual scientists [7].

REFERENCES

1. Garfield E, Sher IH. New factors in the evaluation of scientific literature through citation indexing. *American Documentation* 1963; 14(13): 195-201.
2. Institute for Scientific Information. *Journal Citation Reports*: a bibliometric analysis of science journals in the ISI database. Philadelphia: The Institute; 1993.
3. Saha S, Saint S, Christakeis DA. Impact factor: a valid measure of journal quality? *J Med Libr Assoc* 2002; 91(1): 42-6.
4. Lowry OH, Rosenbrough NJ, Farr AL, et al. Protein measurement with the folin phenol reagent. *J Biol Chem* 1951; 193: 265-275.
5. Mohd HF, Van Leeuwen TN. Impact factors can mislead. *Nature* 1996; 381:186.
6. Garfield E. How can impact factors be improved? *Br Med J* 1996; 313(7054): 411-3.
7. *H-index calculator for an individual scientist's impact*. Available from: URL http: / / www. epidemiology. Org / 2006 / 12 / h - index - calculator - of - scientist - impact. html.

Azhar Mubarik
Editor, PAFMJ
Army Medical College, Rawalpindi