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IMPACT FACTOR – USES, ABUSES, OBSTACLES AND ALTERNATIVES

Saba Sohail



Impact factor is currently the buzz word among the Pakistani medical researchers particularly those teaching at University level and for those requiring research grant funding from the Higher Education Commission (HEC) and other national and international funding agencies.

Research journals are aimed to publish peer reviewed research studies for the purpose of dissemination of knowledge. Bradford's law states that a relatively small dynamic core of journals, publishes the bulk of most important scientific studies. It is argued that a relatively small core of journals contain 95% of the cited articles.¹

The ISI database covers this important and supposedly influential research, indexing complete bibliographic data for every item including the cited references of every journals. The journals are selected on the basis of basic journal standards (timeliness, conforming to international editorial conventions, format, peer review, inclusion of English language article titles, abstract and keywords), editorial content and international diversity of authors.

Among the citation indices are the overall citation rate, Impact Factor (IF) and immediacy index. The current impact factor is the ratio obtained from dividing citations of original research and review articles, received in one year by papers published in the last two years. It is widely used to rank and evaluate journals and also as a surrogate criteria for grant allocations, promotions in academic career and faculty and institutional output evaluation.² An example is the recent ranking list of Universities and Institutes of higher education, issued by HEC and published in leading national newspapers. It was computed on the basis of the number of articles published by an institutes' academia in journals with and without impact factor.

The IF is a complicated issue. On the one hand it is claimed to show a higher visibility and quality of scientific content, so much so that institutions and administrators of research funding link the magnitude of funding to the impact factor acquired by a researcher. On the other hand, there are some formidable objections against it. It may not reflect the clinical importance. Nakayama *et al.* showed that a number of articles published in low impact journals were included in developing respective national guidelines.³

Public health and preventive medicine journals are cited as another example, which are read by practitioners who may

never write.⁴ Using IF as an evaluation criteria for academia and funding, makes research journals lose their primary purpose of disseminating advances in science and instead become a tool for promotion and acquisition of research grant. Researchers, therefore, tend to draw away from the less-recognized journals, creating an interwoven complex of quality, relevance, visibility and survival. There may be some really good and relevant articles, which get rejected by the high IF journals due to abundance of publication material to choose from.

Another observation is that journals which publish reviews are usually more cited and so are the specialty journals as against general-based journals. USA-based journals also occupy a dominating proportion over the south American, European or Australasian journals in the ISI database.

It is also known that journals in quest of the covered number may even suggest their contributors to cite their articles regardless of relevance.⁵

Impact factor is basically a number representing the number of bibliographic citations that a journal receives. It is a very useful indicator but should not be used as the sole criteria.³ It does not indicate how much a particular journal or article improved upon existing clinical and health care practices. Till the availability of another better indicator of clinical relevance and the long time taken by funding agencies and policy makers to review and revise current practices, IF will continue to enjoy due importance.

With time, other factors have been devised and suggested. Information scientists are calculating web-impact factor for journals publishing on-line⁶ as the readers are now more and more resorting to web-searching for references. A Euro factor was proposed to remove the USA-over-representation bias.⁷ Although a clinical impact factor is yet to be coined, an interesting concept was "POEM's." It was defined as information that addresses a common or clinically important question and demonstrates an improvement in patient related outcomes like mortality and morbidity, which is not already being practiced.⁸ None of these have earned sufficient popularity and policy makers' credibility to replace the IF.

Quite a few regularly publishing Pakistani biomedical journals are now endeavoring to get included in the core of the impact-creating journals at the ISI database. For medical editors of a country where research culture has been given an impetus in recent past only, it becomes all the more important to discuss the pros and cons of the efforts to obtain and improve upon impact factor. JCPSP has long been trying to achieve that aim encouraging the contributors to cite as much recently published local literature as possible. One of the aims is the pursuit of impact factor for self and others. Another is to

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inculcate the habit of extensive local literature search prior to declaring a work as the first of its kind and establishing its real novelty and utility.

One hindrance that is particularly obstructing the local journals is non-availability of the hard copy on time or irregularity of publication.

This is disturbing that effort not only with the international indexing and evaluating agencies but also the local indexing services, the MEDLIP.

The quest for Impact Factor has started. It now depends upon the administrative priorities and ground realities to help achieve it, serving a big cause for national medical research journals and the researchers.

Till that time, it is also incumbent on the local databases to devise a local or Pakistani impact factor.

Pakmedinet and MEDLIP were two sources that really helped local researchers and practitioners to evaluate, review and practice medicine in our peculiar physio-social environment. If the PMDC, HEC or Pakmedinet databases contrive a local impact factor or citation index, that would certainly be beneficial in the long run. It may well be a big step towards identification of locally important research, promotion of

national biomedical journals and finally help revise the research grant allocation and acquisition by the local funding agencies at the least.

REFERENCES

1. Garfield E. The significant scientific literature appears in a small core of journals. *The Scientist* 1996; **10**:17.
2. Garfield E. How can impact factor be improved? *Br Med J* 1996; **313**: 411-3.
3. Nakayama T. Comparisons between impact factors and citations in evidence based practice guidelines. *J Am Med Assoc* 2003; **290**: 755-6.
4. Porta M, Fernandez E, Algancil J, Copete JL. The bibliographic "Impact Factor", the total number of citations and related bibliometric indicators: the need to focus on journals of public health and preventive medicine. *Preventive Med* 2004; **49**:15-8.
5. Smith R. Journal accused of manipulating impact factor. *Br Med J* 1997; **314**: 461.
6. Bjornborn L, Ingwersen P. *Scientometrics* 2001; **50**: 65-81.
7. <http://www.vicer.net/eurofactor>
8. Ebel MH, Barry HC, Slawson DC, Shaughnessy AF. Finding POEMs in the medical literature. *J Fam Pract* 1999; **48**: 350-5.

