

Manipulating impact factor: an unethical issue or an Editor's choice?

Alper Sevinc

Gaziantep University, School of Medicine, Department of Internal Medicine, Sahinbey Medical Center, Gaziantep, Turkey

Quantitative assessment of the scientific merit of journals is being used increasingly. The idea of an 'impact' was first mentioned by Dr. Garfield as a reference counting in 1955 [1]. The term "impact factor", the measure used to rank the importance of scientific journals, was coined with the publication in 1963 of the Science Citation Index for 1961. The citation rate of a journal which is quantified as its impact factor has been a subject of controversy. The impact factor has become the common currency of 'scientific quality' [2]. In addition to helping libraries decide which journals to purchase journal impact factors are also used by authors to decide where to submit their articles. As a general rule, the journals with high impact factors are among the most prestigious today [3].

Despite valid concerns, impact factors are widely used as the best simple tool for comparison. However, impact factors may be manipulated by editors. According to the explanatory statements and announcements made by the authors submitting their work to the journals, the impact factor is still being directly manipulated [4-6]. To the best of my knowledge, the first manipulation announcement came by Smith [4] in 1997. He reported that a consultant haematologist was accusing a haematology journal of asking the authors to increase the number of references to papers published in that journal. The analyst at the Institute of Scientific Information called it a distortion of the scientific process. The second manipulation announcement came from the USA in 2002 stating that an associate editor asked the author to add irrelevant papers from his journal to the manuscript submitted

without giving the name and category of the journal [5]. Miller concluded that a line should be drawn at intellectual dishonesty. The third announcement is hidden in the content of a manuscript. Neuberger and Counsell [2] declared that one of the authors has received a letter from an editor suggesting, where possible, to add references from that journal without giving the name and category of the journal in 2002. It is clearly evident that a high-rate of self-citing could affect the impact factor [6].

A fourth manipulation announcement was made by the present author. A manuscript submitted to a rheumatology journal was returned by the editor requesting the author to add references from that journal. The editor suggested the addition of irrelevant references to the submitted manuscript and proposed to resubmit it as a letter to the Editor. It is known that Journal Citation Report calculations include review articles, original research and clinical case reports, but letters or abstracts are excluded. Therefore, the attempt to improve the impact factor is doubled by adding references and recommending that the manuscript be submitted as a letter rather than as a case report.

A journal's impact factor is based on 2 elements: the numerator, which is the number of citations in the current year to any items published in a journal in the previous 2 years, and the denominator, which is the number of substantive articles (source items) published in the same 2 years [3]. The SCI database includes only normal articles, notes and reviews as citable items in the denominator, but citation of all types of articles, such as editorials, letters and meeting abstracts are included in the numerator. Therefore, Editors can raise the impact factor of a journal by frequent reference to their previous editorials, since the database makes no correction for self-citation, or by running a large correspondence section [7].

The impact Factor is not a perfect tool to measure the quality of journals but no better guide is available. Furthermore, it has the advantage of already being in existence and is, therefore, a good technique for scientific eval-

uation. The editor of a journal may "adjust" his/her policy so as to increase the journal's impact factor. However, it is also true that "When impact factors rise, editors editorialize. When they fall, editors fall silent" as Hachinski stated [8]. While the editors remain watchful for their impact factor, the main purpose should be to publish valid, new, and important papers. The abuse of the impact factor should also be discussed in the scientific arena as there are, of course, more manipulations than published. Otherwise, some journals might be surpassed in the impact factor league table. Moreover, impact factors can be recalculated to adjust for the number of self-citations and "clean" impact factors can also be obtained [9].

Correspondence:

Alper Sevinc
Gaziantep University, School of Medicine
Department of Internal Medicine
Sahinbey Medical Center
TR-27310 Gaziantep
Turkey
E-mail: sevinc@gantep.edu.tr

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