European Annals of Otorhinolaryngology, Head and Neck diseases 132 (2015) 311

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Editorial

Which physician assessment index: H, G or R?

The Medline database has been available on-line since the 1970s via the PubMed search engine and includes almost 5000 biomedical journals. The sole method of objective assessment of physicians' scientific productivity was traditionally to count the number of referenced publications.

In 2005, a physics professor at the University of California, Jorge Hirsch [1,2], revolutionized assessment by creating the so-called H index, based on a simple mathematical formula calculating physicians' scientific contribution over the long-term. It was subsequently completed by two other indices (with values systematically higher than the H index): the G index, created in 2006 by Belgian scientist Léo Egghe [3], and the R index, created in 2007 in China [4]. "Publish or Perish" is a freeware application allowing physicians to calculate their own H index, and several databases, such as Google Scholar, have included it as a free and automatic function in their toolboxes. Thus, in the last few years, the H index has become the universally accessible and an indispensable means of assessing physicians' scientific output.

A physician's H index is the number *n* of his or her publications that have been cited at least *n* times each. An H index of 10 means that 10 publications have been cited at least 10 times each. To get it up to 11, there would have to be 11 publications cited at least 11 times each: if the 11 publications are cited 20 times each, the index stays at 11. If another physician has 1 publication that has been cited 100 times, his or her index is 1. The index provides an assessment of publication weighted quantitatively (productivity) and qualitatively (impact). This is not innocuous, inasmuch as the quality and meaningfulness of the research that has been published are not taken into any account. The H index has turned medicine into a competition with the world as its stadium and the Web as its racetrack. There is a helpful website, www.academicproductivity.com, that will coach any physician wishing to acquire the editorial strategy best suited to boosting their "paper productivity" and stepping up their H index. By the use to which they put the index, governing bodies, institutions, administrations, governmental agencies and private consultancies such as Thomson Reuters™ (whose on-line Web of Science calculates physicians' H indices, just like the impact factor of medical journals listed in the Journal Citation Report) have set up a competitive market in medical research and teaching. With its unstoppable progression throughout the scientific world, the H index has become, in the words of the Chronicle of Higher Education [5], "the number that's devouring science". As Sylvain Piron put it in his analysis of Peter Lawrence's work on the dangers incurred by the advent of bibliometric indices: "Once a bibliometric index is taken to be an index of performance and a tool for decision-making, it ceases to be a measurement and becomes an end in itself, dictating the behavior of those concerned. Bibliometric performance, rather than scientific work, becomes a prime objective. Quantitative assessment induces a generalized disturbance of scientific practice, as performance indicators exacerbate the competitive approach. This behavioral modification has catastrophic effects at every stage and for every agent. Both individuals and journals, often under pressure from their marketing departments, act in accordance with these objectives in choosing what articles the former will write and the latter will reject or accept for publication" [6]. Thus, the H index insidiously subverts such values of scientific medical research as sharing, teamwork and constructive criticism within supportive communities. The scientific medical ethic founded on universalism, a vision of research as a public good, disinterestedness and skepticism is being subjugated by an index that is a vector for an Anglo-American culture of rigor, programmed conformism, publication strategy and individual ambition.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References

[1] Hirsch JE. An index to quantify an individual's scientific research output. Proc Natl Acad Sci U S A 2005;102:16569–72.
[2] Laccourreye O. Attention à l'indice H ! Eur Ann Otorhinolaryngol Pathol Dis. http://dx.doi.org/10.1016/j.aforl.2011.11.011
[3] Egghe L. Theory and practice of the g-index. Scientometrics 2006;69:131–5.
[4] Jin BH, Liang LM, Rousseau R, et al. The R- and AR-indices: complementing the H-index. Chin Sci Bull 2007;52:855–63.
[5] http://chronicle.com/free/v52/i08/08a01201.htm
[6] http://evaluation.hypotheses.org/229

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http://dx.doi.org/10.1016/j.anorl.2014.05.001