



Editorial

Using bibliometrics in profiling a journal's evolution

Gary Sayed, PhD., FACNM.

Department of Health Sciences, California State University, Dominguez Hills, Carson, California, United States.

*Corresponding author:

Gary Sayed,
California State University,
Dominguez Hills, Carson,
California, United States.

gsayed@csudh.edu

Received: 18 February 2022
Accepted: 18 February 2022
EPub Ahead of Print: 15 March 2022
Published: 21 May 2022

DOI
10.25259/JMSR_19_2022

Quick Response Code:



Bibliometric analyses and related research activities in scientometrics have significantly increased in popularity in recent years. Originally coined by Pritchard^[1] as an alternative to the term “statistical bibliography,” bibliometrics profiles scholarship in numerical terms. It is rooted in the statistical analysis of published works such as books and articles. It tracks trends in authorship, productivity, and impact patterns. Such analyzes can be applied to individual authors, specific journals, geographic regions, and/or fields of studies. Bibliometric analyzes depict numerical patterns of at times unquantifiable domains such as research quality,^[2] which historically been assessed through the peer-review processes. Nonetheless, bibliometric analyzes have been used for all sorts of research and scholarship-related activities, including but not limited to, research funding and grants, researcher and research centers rankings, and faculty tenure and promotions. The technique is used in rating individual researchers through derived indices such as the H-index with both its proponents^[3] and opponents.^[4] Other similar indices are also used but not as widely recognized.^[5] Bibliometrics are also used in profiling specific disciplinary journals and their impacts through derived quantities and ratios such as the journal impact factor. These rankings are increasingly used by prospective authors in deciding where to publish their works.

One of the useful utilities of bibliometric analyzes is in establishing trends and directions in research production within a specific discipline or emerging fields. These studies help both policymakers and researchers alike in focusing on areas of wider concern and impact. An example is illustrated by Tran *et al.*'s bibliometric study of global evolution and trends of research in artificial intelligence as applied to healthcare.^[6] Others studied similar trends in tropical medicine^[7] and medical big data research.^[8] These global perspectives on the nature and profile of research within such broader topics related to medicine and healthcare would be served well by robust journals and convey the outcomes of these novel research endeavors.

Bibliometric techniques are used in founding quantitative profiles of published scientific works, including the authors of the articles, their institutions, the publishing journals, and the number of citations the articles receive. The latter parameter has become a major area of assessment in bibliometrics. The literature is replete with citation analysis articles. Individual journals have also been profiled using bibliometric analyzes profiling methods.^[9-12] Ibrahim and Jan (2015) analyzed the performance of the Journal of Pakistan Medical Association from 2009 to 2013.^[13] As in other similar studies, the reported trend reflects an ever-increasing number of publications. It identifies its predominant geographic source of contributors. Similar assessments constructed profiles of groups of journals within a discipline. Dynako *et al.* (2020) profiled the publication history of American journals in sports medicine.^[14] Bibliometrics scholars have also examined the extent

How to cite this article: Sayed G. Using bibliometrics in profiling a journal's evolution. J Musculoskelet Surg Res 2022;6:109-10.

and profile of such analyzes on single journals. Kevin, W.U.A., and his team examined 82 bibliometric studies from around the world performed on single journals.^[15] In this issue of the JMSR, a bibliometric review provides a profile of an emerging journal focused on musculoskeletal surgery and related research.^[16] The authors provide an overview of the journal's evolution and its publication trends. Such findings are of interest to the journal's audience and key stakeholders as such prospective contributing authors, research organizations, and funding agencies.

REFERENCES

1. Pritchard A. Statistical bibliography or bibliometrics? *J Doc* 1969;25:348-50.
2. Edge DO. Quantitative measures of communication in science: A critical review. *Hist Sci* 1979;17:102-34.
3. Hirsch JE. An index to quantify an individual's scientific research output. *Proc Natl Acad Sci* 2005;102:16569-72.
4. Koltun V, Hafner D. The h-index is no longer an effective correlate of scientific reputation. *PLoS One* 2021;16:e0253397.
5. Egghe L. Theory and practice of the g-index. *Scientometrics* 2006;69:131-52.
6. Tran BX, Vu GT, Ha GH, Vuong QH, Ho MT, Vuong TT, *et al.* Global evolution of research in artificial intelligence in health and medicine: A bibliometric study. *J Clin Med* 2019;8:360.
7. Falagas ME, Karavasiou AI, Bliziotis IA. A bibliometric analysis of global trends of research productivity in tropical medicine. *Acta Trop* 2006;99:155-9.
8. Liao H, Tang M, Luo L, Li C, Chiclana F, Zeng XJ. Bibliometric analysis and visualization of medical big data research. *Sustainability* 2018;10:166.
9. Thanuskodi S. A bibliometric study. *J Soc Sci* 2010;24:2, 77-80.
10. Martínez-López FJ, Merigó JM, Valenzuela-Fernández L, Nicolás C. Fifty years of the European journal of marketing: A bibliometric analysis. *Eur J Market* 2018;52:439-68.
11. Gavia-Marín M, Merigo JM, Popa S. Twenty years of the journal of knowledge management: A bibliometric analysis. *J Knowl Manag* 2018;22:1655-87.
12. Tur-Porcar A, Mas-Tur A, Merigó JM, Roig-Tierno N, Watt J. A bibliometric history of the journal of psychology between 1936 and 2015. *J Psychol* 2018;152:199-225.
13. Ibrahim M, Jan SU. Bibliometric analysis of the journal of Pakistan medical association from 2009 to 2013. *J Pak Med Assoc* 2015;65:978-83.
14. Dynako J, Owens GW, Loder RT, Frimpong T, Gerena RG, Hasnain F, *et al.* Bibliometric and authorship trends over a 30-year publication history in two representative US sports medicine journals. *Heliyon* 2020;6:e03698.
15. Kevin WU, Zainab AN, Anuar NB. Bibliometric studies on single journals: A review. *Malaysian J Libr Inf Sci* 2009;14:17-55.
16. Sayyad Y, Khoshhal KI. A bibliometric analysis of the journal of musculoskeletal surgery and research. *J Musculoskelet Surg Res* 2022;6:111-6.