h5-index

h5-index is the h-index for articles published in the last 5 complete years.

Various bibliometric indices based on the citations accumulated by scholarly articles, including the h index, g-index, e-index, and Google's i10-index, may be used to evaluate academic productivity in neurological surgery.

The ih(5)-index is a simple, and intuitive metric capable of accurately comparing the recent scholarly efforts of neurosurgical programs and accurately predicting intradepartmental publication equality. The ih(5)-index is relatively insensitive to factors such as isolated highly productive and/or no longer academically active senior faculty, which tend to distort other bibliometric indices and mask the accurate identification of currently productive academic environments. Institutional ranking by ih(5)-index may provide information of use to faculty and trainee applicants, research funding institutions, program leaders, and other stakeholders [1)].

The top 5 most academically productive neurosurgical programs based on ih(5)-index were University of California, San Francisco, Los Angeles, University of Pittsburgh, Brigham & Women's Hospital, and Johns Hopkins Hospital.

The ih(5)-index is a novel, simple, and intuitive metric capable of accurately comparing the recent scholarly efforts of neurosurgical programs and accurately predicting intradepartmental publication equality. The ih(5)-index is relatively insensitive to factors such as isolated highly productive and/or no longer academically active senior faculty, which tend to distort other bibliometric indices and mask the accurate identification of currently productive academic environments. Institutional ranking by ih(5)-index may provide information of use to faculty and trainee applicants, research funding institutions, program leaders, and other stakeholders [2)].

Sonig et al., published the first study that has used departmental h index-and e index-based matrices to assess the academic output of neuroendovascular intervention fellowship programs across the continental US.

Fellowship program listings were identified from academic and organization websites. Details for 37 programs were available. Bibliometric data for these programs were gathered from the Thomson Reuters Web of Science database. Citations for each publication from the fellowship's parent department were screened, and the h and e indices were calculated from non-open-surgical, central nervous system vascular publications. Variables including “high-productivity” centers, fellowship-comprehensive stroke center affiliation, fellowship accreditation status, neuroendovascular h index, e index (h index supplement), h10 index (publications during the last 10 years), and departmental faculty-based h indices were created and analyzed.

A positive correlation was seen between the neuroendovascular fellowship h index and corresponding h10 index ($R = 0.885$; $p < 0.0001$). The mean, median, and highest faculty-based h indices exhibited positive correlations with the neuroendovascular fellowship h index ($R = 0.662$, $p < 0.0001$; $R =$

0.617, p < 0.0001; and R = 0.649, p < 0.0001, respectively). There was no significant difference (p = 0.824) in the median values for the fellowship h index based on comprehensive stroke center affiliation (30 of 37 programs had such affiliations) or accreditation (18 of 37 programs had accreditation) (p = 0.223). Based on the quartile analysis of the fellowship h index, 10 of 37 departments had an neuroendovascular h index of ≥ 54 (“high-productivity” centers); these centers had significantly more faculty (p = 0.013) and a significantly higher mean faculty h index (p = 0.0001).

The departmental h index and analysis of its publication topics can be used to calculate the h index of an associated subspecialty. The analysis was focused on the neuroendovascular specialty, and this methodology can be extended to other neurosurgical subspecialties. Individual faculty research interest is directly reflected in the research productivity of a department. High-productivity centers had significantly more faculty with significantly higher individual h indices. The current systems for neuroendovascular fellowship program accreditation do not have a meaningful impact on academic productivity [3].

An increasing amount of funding in neurosurgery research comes from industry, which may create a conflict of interest (COI) and the potential to bias results. The reporting and handling of COIs have become difficult, particularly as explicit policies themselves and definitions thereof continue to vary between medical journals. In a study, de Lotbiniere-Bassett et al. sought to evaluate the prevalence and comprehensiveness of COI policies among leading neurosurgical journals.

The authors conducted a cross-sectional study of publicly available online disclosure policies in the 20 highest-ranking neurosurgical journals, as determined by Google Scholar Metrics, in July 2016.

Overall, 89.5% of the highest-impact neurosurgical journals included COI policy statements. Ten (53%) journals requested declaration of nonfinancial conflicts, while 2 journals specifically set a time period for COIs. Sixteen journals required declaration from the corresponding author, 13 from all authors, 6 from reviewers, and 5 from editors. Four journals were included in the International Committee of Medical Journal Editors (ICMJE) list of publications that follow the Uniform Requirements for Manuscripts Submitted to Biomedical Journals (currently known asRecommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals). Five journal policies included COI declaration verification, management, or enforcement. The neurosurgery journals with more comprehensive COI policies were significantly more likely to have higher h5-indices (p = 0.003) and higher impact factors (p = 0.01).

In 2016, the majority of, but not all, high-impact neurosurgical journals had publically available COI disclosure policies. Policy inclusiveness and comprehensiveness varied substantially across neurosurgical journals, but COI comprehensiveness was associated with other established markers of individual journals' favorability and influence, such as impact factor and h5-index [4].

1)
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