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Original Article

Assessing the H-Indexes of Editorial Board Members in Ophthalmology Journals Published in Türkiye

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Abstract

Objectives: The focus of this study was to assess and compare the h-indexes of editorial board members from eight ophthalmology journals in Türkiye and explore the potential correlations between these indexes and the sub-specialties of board members.

Methods: Conducted in December 2023, this cross-sectional study utilized publicly available data from Google Scholar (GS), Web of Science, and Scopus. The h-index and number of publications by editorial board members from eight Turkish ophthalmology journals were analyzed. Statistical analysis for this study involved the use of SPSS, employing descriptive statistics, one-way analysis of variance, and *post hoc* tests for group comparisons.

Results: Of the 415 editorial board members, 26 were not ophthalmologists and 12 worked abroad; the credentials of 10 could not be verified. A total of 367 authors were evaluated, revealing significant differences in publication numbers and h-indices among the different subspecialties. Notably, the retinal specialists demonstrated higher productivity. Variability in citation counts was observed across databases, with GS having the widest range. Differences were also noted in the publication and h-index among the editorial boards of different journals.

Conclusion: The h-index and number of publications effectively reflected the active status of ophthalmology authors. This study contributes valuable information regarding Turkish ophthalmology journals and their editorial boards, serving as an inspiration for young ophthalmologists. These findings underscore the diverse successes of ophthalmologists across subspecialties, encouraging the exploration of less-explored areas in academic pursuits.

Keywords: Editorial board members, H-indexes, ophthalmology journals, Türkiye

Introduction

Journals in the field of general clinical ophthalmology are educational resources that provide information on the latest developments in eye diseases and treatment. Refereed journals are instrumental in the career development of scholars in the field of academic ophthalmology and contribute significantly to assessing the overall achievements of an academic department. Exploring the h-index scores of editorial board members across Turkish ophthalmology journals offers profound insights into the publication trends and the academic influence wielded by these professionals within the field.

Through the h-index introduced by Hirsch in 2005, the impact of productivity measurements and scientific publica-

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tions thus began to be more widely recognized (1,2). The h-index not only assesses the quantity of scholarly works but also incorporates the aspect of quality by considering the frequency of citations. Since its definition, the h-index is employed as a tool for evaluating research impact within various medical and surgical disciplines, including anesthesiology, hepatology, neurosurgery, otolaryngology, radiology, general surgery, urology, and ophthalmology (3-10).

To define the h-index simply, if author A has 40 publications and 15 of them have received 15 citations each, the h-index will be 15. However, if author B has 30 publications and 20 of them have received 20 citations each; the h-index of this author will be 20. Therefore, the effectiveness of Author B is greater. Scopus from Elsevier, Web of Science (WoS) from Thomson Scientific, and Google Scholar (GS) were used to count the citations. WoS and Scopus determined the total amount of material published by the authors.

Ophthalmology journals are educational resources. In Türkiye, they represent continuity in the academic field by publishing world-class information. As of December 2023, there are eight eye journals: Journal of Glaucoma and Cataract (JGC), Journal of Retina-Vitreous (JRV), Current Retina Journal (CRJ), MN Ophthalmology (MNO), Beyoglu Eye Journal (BEJ), Turkish Journal of Ophthalmology (TJO), Turkiye Klinikleri Journal of Ophthalmology (TKJO), and European Eye Research (EER).

This research is focused on contrasting the h-index scores of editorial board members from eight different ophthalmological journals based in Türkiye, and investigating whether there is any correlation between the h-indexes and the subspecialties of editorial board members.

Methods

A cross-sectional study was conducted in December 2023 using data from publicly available sources. The bibliometric indices of the board members of the JRV, JGC, CRJ, TKJO, TJO, MNO, BEJ, and European Eye Journal, which were published in Türkiye, were evaluated.

Authors' h-indexes were evaluated by searching WoS, GS, and Scopus. Published documents were collected from the WoS and Scopus. The subspecialties are listed as retina, cornea-refractive surgery, glaucoma, oculoplastics, uvea, and strabismus neuro-ophthalmology; any other subspecialty is listed as general ophthalmology. The area in which the authors were interested was determined by searching for the todnet.org on the member list; if there was membership in more than one unit, the first unit in which the author was a member was considered the author's primer section. If there were no such cases, the authors considered a general ophthalmologist. Authors who were not actively working in Türkiye and credentials of authors who could not be verified were excluded from the study.

SPSS (v. 25.0 for macOS, IBM) was used to analyze the data. Along with descriptive statistical methods (percentage, mean, and standard deviation), one-way analysis of variance was used to compare the groups, and the Tamhane method was used as a post hoc test. The statistical significance level for the evaluated results was set at $p<0.05$. Data does not show normal distribution by Kolmogorov–Smirnov test ($p<0.023$).

The research adhered to the ethical guidelines set forth in the Declaration of Helsinki and did not necessitate formal ethical approval.

Results

In the analysis of the 415 editorial board members, 26 individuals were identified as non-ophthalmologists. Among these, 10 credentials could not be verified and 12 were based abroad. Consequently, a thorough evaluation was performed on 367 authors actively participating on the editorial board, revealing that 70 authors held positions on one or more editorial boards.

A noticeable difference was observed in the number of WoS publications for TJO compared to both CRJ and TKJO, along with variations in the respective WoS h-index and the total number of publications listed in Scopus among the editorial boards. A significant difference was observed between the TJO and TKJO groups. Nonetheless, no notable distinction was found in the average number of citations indexed in the WoS across the editorial boards of the journals. The h-index of the JRV and MNO editorial boards, as indexed on GS, showed a statistically significant difference compared with the editorial board of TKJO. In addition, the h-index of JRV, TJO, and CRJ on Scopus also demonstrated a statistically significant difference from the h-index of the TKJO editorial board. In addition, there was a statistically significant difference between TJO and EER editorial boards (Table 1).

A significant statistical difference was observed in the number of publications in the WoS when comparing retinal specialists to both strabismus specialists and general ophthalmologists. A comparable observation pattern was noted among corneal specialists, strabismus specialists, and general ophthalmologists. This observation indicates a significant variation in the number of publications within these specialized fields.

Moreover, a notable statistical difference was evident in the association of retinal specialists, strabismus specialists, and general ophthalmologists with the WoS citation index. A similar distinction was observed between glaucoma and strabismus specialists. In the domain of WoS h-index scores, a substantial divergence was noted between retinal

Table 1. Web of Science, Scopus, and Google Scholar h-indexes of editorial board members, average number of publications in Scopus and Web of Science, and average number of citations per Web of Science

Journal	Web of science H-index	Google scholar H-index	Scopus H-index	Scopus publication count	Web of science publication count	Web of science citation average
Turkish Journal of Ophthalmology	13.4±4.6	19.4±9.9	18.2±6.8	97±56	74±36	10.1±5.6
Journal of Retina-Vitreous	11.0±3.8	16.7±5.4	14.7±5.2	68±49	46±32	11.0±5.8
MN Ophthalmology	10.5±4.6	15.8±5.7	13.3±5.4	55±49	46±38	10.8±6.6
Beyoglu Eye Journal	10.1±4.0	14.1±5.5	12.6±5.1	61±40	46±30	8.2±4.2
Current Retina Journal	10.0±3.4	14.8±5.1	13.1±3.4	57±28	40±24	9.7±5.4
Journal of Glaucoma and Cataract	10.0±4.9	13.5±5.7	12.3±4.3	49±27	44±28	10.1±6.9
European Eye Research	9.5±3.6	13.3±4.1	11.3±4.1	57±29	51±31	7.1±3.2
Turkiye Klinikleri Journal of Ophthalmology	8.6±4.0	12.4±5.4	10.7±4.9	44±34	37±30	8.3±4.6

The statistical significance level for the evaluated results was accepted as $p<0.05$.

specialists and both strabismus specialists and general ophthalmologists. Similarly, a significant difference was observed between glaucoma specialists and cornea specialists, as well as between general ophthalmologists.

Considerable statistical disparity was noted in the GS h-index between retinal specialists and cornea, glaucoma, strabismus specialists, and general ophthalmologists. In addition, a pronounced difference was observed in the volume of Scopus articles among retinal specialists compared to strabismus specialists and general ophthalmologists.

Concerning the Scopus h-index, a significant disparity became apparent in the comparison between retina and cornea specialists, along with general ophthalmologists. Similarly, a noticeable difference was observed between the Uvea-Behcet experts and the general ophthalmologists. The h-index for strabismus specialists in Scopus was significantly lower than that of their peers specializing in retina, uvea-Behcet, and glaucoma.

Discussion

The purpose of this research is to evaluate the academic productivity of the editorial board of eight ophthalmology journals actively publishing in Türkiye. The comparison is grounded on the quantity of scholarly articles produced and the h-index values. While publication numbers were evaluated using WoS and Scopus, the h-indices were evaluated using WoS, GS, and Scopus. The number of publication counts was between 172 and 2 on WoS and 218 to 4 on Scopus.

Among GS, Scopus, and WoS citations, GS has the widest range and has been noted to detect over 90% of citations listed in Scopus and WoS (11). While WoS and Scopus use predominantly English literature for citation counts, GS also uses non-English literature (12). Unlike the other two sites, GS can sometimes count an article more than once; the citation count in GS may also be high for this reason (13).

The citation averages of JGC, JRV, CRJ, MNO, BEJ, TJO, and TKJO journals that are actively published in our country are 0.68, 0.76, 0.12, 0.54, 0.11, 0.85, and 0.59, respectively (14-20). EER does not yet have a citation average. Citation averages may depend on when journals were first published, as well as on both the number of publications and the high demand for these journals. Despite variations in citation counts, when we compared the editorial boards of the journals, no statistical differences were noted between the WoS, Scopus, and GS findings.

Current developments in the retina and the applicability of new drugs, devices, and surgical methods have enabled experts in this unit to publish more (21). Other studies have shown that retina, cornea, and glaucoma specialists have higher academic success, consistent with our findings (22). However, when we evaluated it with the GS or Scopus h-index instead of the WoS h-index, one can see that ocular oncology specialists rank highest among authors. This situation may be due to very hard-working ophthalmologist studies in a limited number of units.

Our research indicates that retina specialists are more active on editorial boards of journals than other branches of publishing. When we ranked them according to the WoS h indexes, the authors with the highest rankings were retinal specialists. The fact that retina specialists have more indexes and publications than strabismus specialists and general ophthalmologists in this study may be because the quantity of published works and the count of physicians specializing in strabismus are limited, and general ophthal-

mologists tend to concentrate on the broader field of ophthalmology instead of delving into a particular subspecialty. The number of ophthalmologists in each subspecialty must be considered when evaluating the academic productivity across specialties. The shortage of ophthalmologists in both neuro-ophthalmology and strabismus may result in a deficiency of academic data (23).

Investigating academic productivity in ophthalmology subspecialties through publication counts and h-index values reveals a complex interplay of factors influencing disparities in academic outcomes. Although our study cannot definitively establish causal relationships, it does highlight an intriguing trend that requires further investigation. Factors such as the availability of research funding, the pace of technological innovation, academic interest, community size in subspecialties, and the nature of multidisciplinary research collaborations likely play important roles. Geographic and institutional support, as well as cultural and systemic influences in the academic and medical communities, may further influence research opportunities. Our study highlights the importance of a more in-depth investigation of the driving forces behind the observed trends in academic productivity of ophthalmologists practicing in our country and suggests avenues for potential growth and support in this field.

Our study had some limitations. Some editorial boards did not have a confirmed WoS or GS address or had more than one address. Again, because there were some authors with the same name, it is possible that the author selection process was flawed. The chosen authors were identified as general ophthalmologists due to the absence of specialized fields apart from the aforementioned ones or because they did not have active branch memberships in TODNET. Furthermore, the potential for inaccuracies in self-reported subspecialties on TODNET.org or the influence of an article's publication age further establishes a balanced discussion. In addition, some authors may have articles that have been approved for publication but have not yet been published.

Conclusion

The h-index and the number of publications show the active status of authors in their academic life. Our study aims to reveal the publication status of journals that guide ophthalmologists in our country and the reputable editorial boards that publish these journals to inspire young ophthalmologists and to take these distinguished and valuable doctors as an example. Although retina and cornea specialist ophthalmologists are more active in academic life, there are also successful ophthalmologists working in branches such as ocular oncology and neuro-ophthalmology, and we hope that young ophthalmologists will focus on these rare areas of interest.

Disclosures

Ethics Committee Approval: The research adhered to the ethical guidelines set forth in the Declaration of Helsinki and did not necessitate formal ethical approval.

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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. [CrossRef]
2. Ball P. Achievement index climbs the ranks. Nature 2007;448:737. [CrossRef]
3. Pagel PS, Hudetz JA. An analysis of scholarly productivity in United States academic anaesthesiologists by citation bibliometrics. Anaesthesia 2011;66:873–8. [CrossRef]
4. Poynard T, Thabut D, Munteanu M, Ratziu V, Benhamou Y, Deckmyn O. Hirsch index and truth survival in clinical research. PLoS One 2010;5:e12044. [CrossRef]
5. Khan NR, Thompson CJ, Taylor DR, Venable GT, Wham RM, Michael LM, et al. An analysis of publication productivity for 1225 academic neurosurgeons and 99 departments in the United States. J Neurosurg 2014;120:746–55. [CrossRef]
6. Svider PF, Choudhry ZA, Choudhry OJ, Baredes S, Liu JK, Eloy JA. The use of the h-index in academic otolaryngology. Laryngoscope 2013;123:103–6. [CrossRef]
7. Bakkalbasi N, Bauer K, Glover J, Wang L. Three options for citation tracking: Google Scholar, Scopus and Web of Science. Biomed Digit Libr 2006;3:7. [CrossRef]
8. Turaga KK, Gamblin TC. Measuring the surgical academic output of an institution: The "institutional" H-index. J Surg Educ 2012;69:499–503. [CrossRef]
9. Benway BM, Kalidas P, Cabello JM, Bhayani SB. Does citation analysis reveal association between h-index and academic rank in urology? Urology 2009;74:30–3. [CrossRef]
10. Bayramlar H, Uslu H, Bayramlar OF, Karadag R. Comparison of the h-indices of the editorial board members of seven ophthalmic subspecialty journals. J Fr Ophtalmol 2019;42:349–53. [CrossRef]
11. Martín-Martína A, Orduna-Malea E, Thelwall M, López-Cózar ED. Google Scholar, Web of Science, and Scopus: A systematic comparison of citations in 252 subject categories. J Informetr 2018;12:1160–77. [CrossRef]
12. Anker MS, Hadzibegovic S, Alessia L, Haverkamp W. The difference in referencing in Web of Science, Scopus, and Google Scholar. ESC Heart Fail 2019;6:1291–312. [CrossRef]

13. Adriaanse LS, Rensleigh C. Web of Science, Scopus and Google Scholar: A content comprehensiveness comparison. Electron Libr 2013;1:727–44. [CrossRef]
14. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/409/glokom-katarakt. Accessed Dec 05, 2023.
15. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/82/retina-vitreus. Accessed Dec 05, 2023.
16. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/176/guncel-retina-dergisi. Accessed Dec 05, 2023.
17. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/70/mn-oftalmoloji. Accessed Dec 05, 2023.
18. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/1169/beyoglu-eye-journal Accessed Dec 05, 2023.
19. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/415/turk-oftalmoloji-dergisi Accessed Dec 05, 2023.
20. Available from: https://search.trdizin.gov.tr/tr/dergi/detay/129/turkiye-klinikleri-oftalmoloji-dergisi. Accessed Dec 05, 2023.
21. Mansour AM, Mollayess GE, Habib R, Arabi A, Medawar WA. Bibliometric trends in ophthalmology 1997-2009. Indian J Ophthalmol 2015;63:54–60. [CrossRef]
22. Kumar A, Cheeseman R, Durnian JM. Subspecialization of the ophthalmic literature: A review of the publishing trends of the top general, clinical ophthalmic journals. Ophthalmology 2011;118:1211–4. [CrossRef]
23. Frohman LP. The human resource crisis in neuro-ophthalmology. J Neuroophthalmol 2008;28:231–4. [CrossRef]