Original Article

Bibliometric Review of Pakistan Journal of Ophthalmology

Zameer Hussain Baladi, Mumtaz Hussain Satti

Pak J Ophthalmol 2019, Vol. 35, No. 4

See end of article for authors affiliations

Correspondence to:
Zameer Hussain Baladi
King Saud Bin Abdul Aziz University for Health Sciences, College of Applied Medical Sciences, Riyadh. Kingdom of Saudi Arabia.
Email: baladiz@ksau-hs.edu.sa & zameer.baladi@gmail.com

Purpose: To analyze the publication patterns of Pakistan Journal of Ophthalmology (PJO) for the last 24 years from 1995 to 2018.

Study Design: Descriptive Bibliometric analysis.

Place and Duration of Study: Medical Libraries, College of Applied Medical Sciences and College of Science & Health Profession, King Saud bin Abdul Aziz University for Health Sciences, Riyadh Saudi Arabia. June 2018 to April 2019.

Material and Methods: The data for the study was retrieved from websites of Pakistan Journal of Ophthalmology (PJO) and Pak Medi Net for statistical analysis in MS Excel 2010 version. The data was analyzed by dividing the studied period into two parts; a) first 12 years (1995 – 2006) and b) the last 12 years (2007 – 2018) for better understanding. This study examined 855 articles published in 24 volumes with 8.9 articles per issue from 1995 to 2018 contributed by 2816 authors.

Results: A gender-wise comparison among the contributing authors revealed 2378 males (84.4%) and 437 females (15.5%). It was also revealed that 141 (16.4%) articles were written by a female as the first author during the studied period. Majority of the articles (n = 734, 85.8%) were written by multiple authors instead of single authors (n = 121, 14.1%). Maximum number of articles were published in the year 2014 & 2018 (48 articles in each volume) and minimum number of articles were published in 1995 and 1997 (20 articles in each volume).

Conclusion: This study finds that Pakistan Journal of Ophthalmology (PJO) is published regularly and over the last 24 years has gained the confidence of researchers, institutes, and readers.

Key Words: Authorship, Bibliometrics, eye diseases, Journal.

Pakistan Journal of Ophthalmology is the official Journal of Ophthalmological Society of Pakistan (OSP) recognized by the Pakistan Medical and Dental Council (PMDC) under IP/008. The society's leaders have endeavored to support programs, which would improve the knowledge of ophthalmologists to provide better patient care and management in vitreo-retina, oculoplastics, glaucoma, pediatric ophthalmology, cataract and refractive surgery[1]. Bibliometric study is one of the several methods to calculate the research productivity of a journal using a combination of mathematical and statistical methods[2]. Bibliometric data plays a vibrant role in research efficiency of a journal connected with a special or specific subject, and an institute in terms of new ideas, techniques for analyzing scientific research as correct and relevant to practice[3,4].

According to Scimago Journal & Country Rank (2018), Pakistan stands at 44th position in all regions and 10th Position in Asiatic Region with 109,760 citable

documents. There are 74 journals enrolled in Web of Science (WoS) and 117 enrolled on a link Scimago journal and country rank, related to various ophthalmic sub-specialties[5,6]. Scientific writings began with the two general medical journals; French Journal des Savants and the British Philosophical Transactions of the Royal Society in the 17th century until the end of 18th century. Before the end of 20th-century specialist medical journals were famous, and later the journals which reflected the sub-specialties of any discipline of health sciences got attention of medical communities[7].

This particular study was conducted to find the characteristics of publications in Pakistan journal of ophthalmology during the last 24 years.

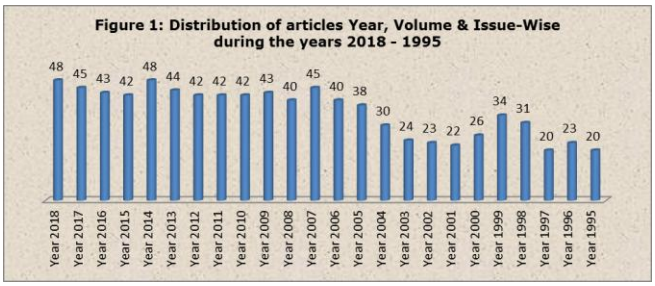
MATERIAL AND METHODS

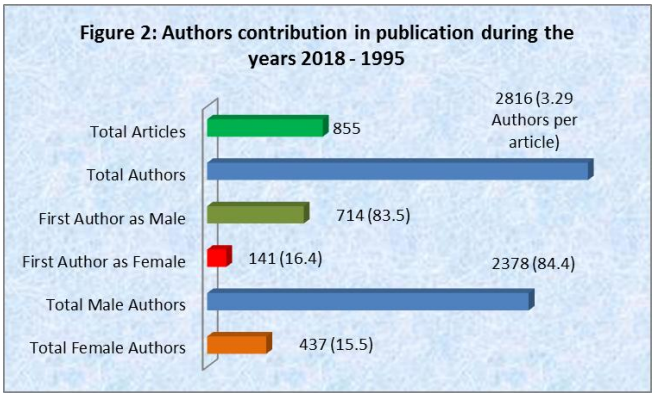
The data of articles published in Pakistan Journal of Ophthalmology (PJO) during the year 1995 – 2018 was downloaded, collected and tabulated in MS Office (Excel 2010) in the library of College of Applied Medical Sciences, King Saud bin Abdul Aziz University for Health Sciences Riyadh, Kingdom of Saudi Arabia. Data was collected from June 2018 to April 2019 from the websites of Pakistan Journal of Ophthalmology (PJO) (http://www.pjo.com.pk/), and from Pak Medinet (http://www.pakmedinet.com/).

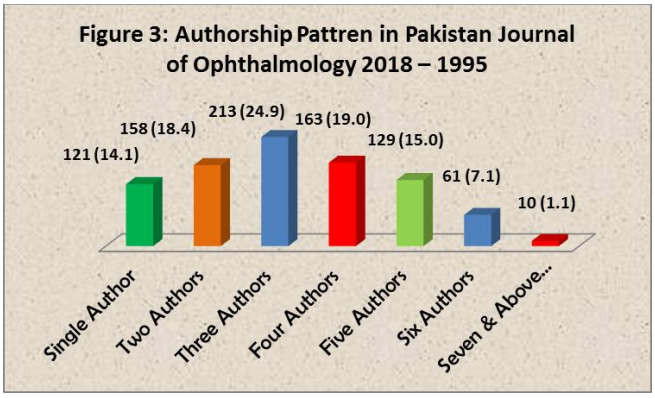
The data was analyzed by dividing the studied period into two parts; a) first 12 years (1995 – 2006) and b) the last 12 years (2007 – 2018) for better understanding. The objectives of the study were; a) to find the year, volume & issue wise publications, b) to explore the contribution of authors in publications, c) to discover the gender-wise distribution of the authors, d) to identify the pattern of authorship. Statistical analysis of the results was done using Microsoft Excel, version 2010.

RESULTS

There were 2816 authors who contributed 855 articles, which were published with an average of 35 articles per volume and 8.9 per issue during the studied period. Maximum number of articles were published in the year 2014 & 2018 (48 articles in each volume) and minimum number of articles were published in 1995 and 1997 (20 articles in each volume) as shown in figure 1. Male authors were 2378 (84.4%) and female authors were 437 (15.2%) out of 2816 total authors. The ratio of female authors was significantly increased as the first author in the last 11 years of publication (figure 2).







Majority 85.8% articles were written by multiple authors in both halves (25.8% and 56.9%). There were 14.1% articles written by solo or single author out of 855 articles. The first half shows that the solo articles were 33.2% higher than the second half (figure 3). There were only ten female authors who submitted article as single-author.

Distribution of articles Year, Volume & Issue-Wise during the years 1995 to 2018 is given in table 1. Table 2 (Distributed in A & B halves) explains the

Table 1: Distribution of articles Year, Volume & Issue-Wise during the years 2018 – 1995.

S. No	Year	Volume	Issue 1	Issue II	Issue III	Issue IV	Total	%	APIA*
1	2018	34	12	10	13	13	48	5.61%	12
2	2017	33	11	11	11	12	45	5.26%	11.25
3	2016	32	11	11	11	10	43	5.03%	10.75
4	2015	31	11	11	10	10	42	4.91%	10.5
5	2014	30	12	12	13	11	48	5.61%	12
6	2013	29	10	11	11	12	44	5.15%	11
7	2012	28	11	12	9	10	42	4.91%	10.5
8	2011	27	9	12	10	11	42	4.91%	10.5
9	2010	26	10	10	11	11	42	4.91%	10.5
10	2009	25	10	11	11	11	43	5.03%	10.75
11	2008	24	11	10	10	9	40	4.68%	10
12	2007	23	10	12	11	12	45	5.26%	11.25
13	2006	22	11	10	9	10	40	4.68%	10
14	2005	21	8	8	11	11	38	4.44%	9.5
15	2004	20	7	7	8	8	30	3.51%	7.5
16	2003	19	6	5	7	6	24	2.81%	6
17	2002	18	5	5	5	8	23	2.69%	5.75
18	2001	17	5	6	5	6	22	2.57%	5.5
19	2000	16	6	7	6	7	26	3.04%	6.5
20	1999	15	7	9	8	10	34	3.98%	8.5
21	1998	14	7	9	7	8	31	3.63%	7.75
22	1997	13	5	6	4	5	20	2.34%	5
23	1996	12	6	6	5	6	23	2.69%	5.75
24	1995	11	4	4	7	5	20	2.34%	5
	All issues with %		205 (24%)	215 (25.1%)	213 (14.9%)	222 (25.9%)	855		

APIA: Articles per-issue average

Table 2(A): Breakdown of authorship pattern.

Authors	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	Total
Single	10	6	7	5	3	8	7	7	8	5	8	10	84 (25.3)
Two	7	7	6	4	7	5	12	12	6	6	3	3	78 (23.5)
Three	8	10	7	5	6	4	3	11	9	6	4	3	76 (23)
Four	7	6	5	5	3	4	3	4	4	3	1	4	49 (14.8)
Five	5	4	4	3	1	1	0		4		3		25 (7.5)
Six	2	5	1	2	3		1				4		18 (5.4)
Seven & Above	1												1 (0.3)
Total	40	38	30	24	23	22	26	34	31	20	23	20	331

Table 2(B): Breakdown of authorship pattern.

Authors	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	Total
Single	3	3	3	0	3	4	5	2	2	4	3	5	37 (7)
Two	12	5	5	7	11	6	4	4	4	7	7	8	80 (15.2)
Three	12	17	14	14	10	11	8	11	8	11	11	10	137 (26.1)
Four	8	6	11	8	10	8	9	11	13	8	13	9	114 (21.7)
Five	7	12	9	10	8	10	8	9	9	6	6	10	104 (19.8)
Six	5	2	1	2	5	5	6	3	5	6		3	43 (8.2)
Seven & Above	1			1	1		2	2	1	1			9 (1.7)
Total	48	45	43	42	48	44	42	42	42	43	40	45	524

breakdown of authorship pattern in the publications during the studied period. The first half shows that the production of 25.3% articles were as single or solo author as compared to 7% in the second half. The increased number of publications over the past years shows constant publication approach and

determination of the researchers and the editorial team of PJO.

DISCUSSION

According to an Editor of the American Journal of Ophthalmology, there are many hardships faced by the editors including, irregular behaviors by authors, delayed information by the authors for submission and rejection by other journals[8]. American Journal of Ophthalmology received 1042 full-length original manuscripts from 53 countries, between October 2009 to September 2010. Majority of articles (273) were from the United States of America followed by Japan (141). Among these, 257 (24.6%) were accepted for publication[8]. An interesting study was applied on ophthalmic literature published in American Journal of Ophthalmology and Archives of Ophthalmology from January 2012 to December 2012 to determine the statistical methods used to evaluate the participation of an author in research productivity. This study examined 780 peer-reviewed articles and 618 (79.2%) articles were reported to use most of the statistical methods. Contingency tables, t-tests, and nonparametric tests were frequently used[9].

To assess the contribution of Arab authors in ophthalmology, a study was designed and conducted in Web of Science (WoS) in 2015. The study found that 216,921 articles were published under the title of "Ophthalmology" worldwide. It was also revealed that the participation of Arab countries in researching ophthalmology is 0.96% around the globe. The contribution of researchers affiliated with Arab countries was constant, with 828 articles. Kingdom of Saudi Arabia had the highest research output followed by Egypt 461 articles and Tunisia 210 articles. Countries with the highest collaboration with researchers in the Arab world in ophthalmology research were USA followed by England and Spain. The most research productive organization in Arab countries was King Khalid Eye Specialist Hospital with 396 articles authored or co-authored[10]. A similar study was initiated on PubMed (Free) database to know the participation of Indian ophthalmic papers published from 2001 to 2006 in the peer-reviewed journals in the discipline of ophthalmic and vision research. Results showed that 2163 articles were published during the studied period[11]. In the previous decade, a study was conducted to analyze the scientific production published in the field of ophthalmology and visual sciences in Argentina, Brazil, Chile, Paraguay and Uruguay from 1995-2004. Study found that 1216 articles were published in this period. This study provides a novel perspective in this field to maintain quality and quantity in ophthalmology and visual sciences research [12].

An analysis was conducted in 2018 on quarterly Pakistan Journal of Pharmaceutical Sciences (PJPS) from 1998 to 2012. Total 2941 authors contributed 722 articles. This study revealed that publications were doubled in PJPS after the year 2005. The percentage of female authors was 32.4%[13]. Writing scholarly in a journal is the core component for communicating to a specific audience in the specialty with other sub-specialties of the subject. A retrospective appraisal of this journal displayed the robust peer-review system, which helps researchers to communicate research idea appropriately to its readers. A similar study was conducted to explore research trends in the ophthalmic literature published in the top twenty ranked ophthalmology journals from 2009 to 2013 relative to the research productivity of a country[14]. It showed that 7,338 articles were published by the USA, UK, and Europe out of 19338 articles, followed by China, Korea and India as major contributors[14]. Additionally, an interesting study unfolds the development in the past decade and found 100 most cited articles under the title "Ophthalmic epidemiology" which were published in Ophthalmology journal and cited 61 to 333 times[15].

Simultaneously, an observational study conducted to analyze women's participation in original articles and editorials on three ophthalmology journals, which comprised past ten years as academic publications. The study found the participation of female researchers was 671 original articles with 89 editorials[16]. Moreover, a huge study was conducted in ophthalmologic journals indexed in Web of Science (WoS) from 2008 to 2018 to determine the representation of female authorship according to first name, under the title "Sex Disparities in Ophthalmic Research: A Descriptive Bibliometric Study on Scientific Authorships". The data of 248 ophthalmic journals retrieved 87,640 (25.4%) articles, which were written by 344,433 authors. Overall 120,305 (34.9%) female participants were calculated[17]. However, according to one research, the contribution of female scholars is advanced in dermatological research as compared with other medical disciplines[18].

In January 2019, a study was conducted to estimate the number of publications on nephrology clinical trials published from 1966 to 2017 and preclinical studies from 1945–2017 in two databases

namely; a Cochrane library and PubMed indexed journals. Study reported that 118 clinical trials and 135 preclinical studies were published in leading journals[19]. Moreover, an interesting study figures out that 2,135 peer-reviewed papers were published from 2009 to 2018 on retinal vein occlusion (RVO) a subspecialty of ophthalmology from Web of Science Core Collection to identify potential collaborators and partner institutions[20]. Lastly, assessing gaps are important to researchers between the specialty and subspecialty of visual sciences to categorize the objectives for achieving goals in future. Our study enlightened the encouraging policies of PJO to publishing, organizational environment and support of information technologies, which are influential factors in encouraging contributors in ophthalmic research.

CONCLUSION

This study finds that Pakistan Journal of Ophthalmology (PJO) is published regularly and over the last 23 years has gained the confidence of researchers, institutes, and readers.

Disclaimer

None to declare.

Conflict of Interest

None to declare.

Funding Disclosure

None to declare.

REFERENCES

1. **Butt, N.** Ophthalmological Society of Pakistan. Retrieved on September 05, 2018 from: http://www.apaophth.org/ophthalmological-society-of-pakistan/
2. **Liu, L., Jiao, J.H. and Chen, L.** Bibliometric study of diabetic retinopathy during 2000–2010 by ISI. International journal of ophthalmology, 2011; 4 (4): 333.
3. **Ferraz, VCT, Amadei JRP, Santos CF.** The evolution of the Journal of Applied Oral Science: a bibliometric analysis. J Appl oral Sci. 2008; 16 (6): 420-427.
4. **Porter AL, Kongthon A, Lu JC.** Research profiling: improving the literature review. Scientometrics, 2002; 53 (3): 351-370.
5. **Liu J, Tian J, Kong X, Lee I, Xia F.** Two decades of information systems: a bibliometric review. Scientometrics, 2019; **118:** 617–643. Doi:10.1007/s11192-018-2974-5
6. SCImago, (n.d.). SJR — SCImago Journal & Country Rank [Portal]. Retrieved on September 05, 2018, from: http://www.scimagojr.com/countryrank.php?region=Asiatic%20Region
7. **Smith, R.** The trouble with medical journals. J Roy Soc Med. 2006; 99 (3): 15-119.
8. **Liesegang TJ.** The International American Journal of Ophthalmology. American J Ophthalmol. 2011; 152 (1): 1-2.
9. **Lisboa R, Meira-Freitas D, Tatham AJ, Marvasti AH, Sharpsten L, Medeiros FA.** Use of statistical analyses in the ophthalmic literature. Ophthalmology, 2014; 121 (7): 1317-21.
10. **Sweileh WM, Al-Jabi SW, Shanti YI, Sawalha AF, Sa'ed HZ.** Contribution of Arab researchers to ophthalmology: a bibliometric and comparative analysis. Springer plus, 2015; 4 (1): 42.
11. **Kumaragurupari R, Sieving PC, Lalitha P.** A bibliometric study of publications by Indian ophthalmologists and vision researchers, 2001-06. Indian J. Ophthalmol. 2010; 58 (4): 1/6.
12. **Ragghianti CP, Martínez R, Martins J, Gallo JE.** Comparative study of scientific publications in Ophthalmology and visual Sciences in Argentina, Brazil, Chile, Paraguay and Uruguay (1995-2004). Arquivos brasileiros de oftalmologia. 2006; 69 (5): 719-723.
13. **Baladi ZH., Haq IU, Hussain M, Elahi G.** A Bibliometric Assessment from 1998-2012. Pak J Pharm Sci. 2018; 33 (3): 714-718.
14. **Schulz CB, Kennedy A, Rymer BC.** Trends in ophthalmology journals: a five-year bibliometric analysis (2009-2013). Int J ophthalmol. 2016; 9 (11): 1669.
15. **Liu L, Li Y, Zhang GS, Wu JY, Majithia S, Tham YC et al.** Top 100 cited articles in ophthalmic epidemiology between 2006 and 2016. Int J ophthalmol. 2018; 11 (12): 1994.
16. **Franco-Cardenas V, Rosenberg J, Ramirez A, Lin J, Tsui I.** Decade long profile of women in ophthalmic publications. JAMA Ophthalmol. 2015; 133 (3): 255-60.
17. **Kramer PW, Kohnen T, Groneberg DA, Bendels MH.** Sex Disparities in Ophthalmic Research: A Descriptive Bibliometric Study on Scientific Authorships. JAMA Ophthalmol. 2019 Aug 15. Doi:10.1001/jamaophthalmol.2019.3095.
18. **Bendels MHK, Dietz MC, Brüggmann D.** Gender disparities in high-quality dermatology research: a descriptive bibliometric study on scientific authorships *BMJ Open,* 2018; **8:** e020089.
19. **Chatzimanouil MK, Wilkens L, Anders HJ.** Quantity and reporting quality of kidney research. J Am Soc Nephrol. 2019; 30 (1): 13-22.
20. **Zhao F, Du F, Shi D, Zhou W, Jiang Y, Ma L.** Mapping research trends of retinal vein occlusion from 2009 to 2018: a bibliometric analysis. Peer J. 2019; 7: e7603.

Author's Affiliation

Zameer Hussain Baladi
DPA. MLIS. M.Phil
Librarian, King Saud Bin Abdul Aziz University for Health Sciences, College of Applied Medical Sciences, Riyadh. Kingdom of Saudi Arabia.

Mumtaz Hussain Satti
MLIS
Librarian, King Saud Bin Abdulaziz University for Health Sciences, College of Science & Health Profession, Riyadh. Kingdom of Saudi Arabia.

Author's Contribution

Zameer Hussain Baladi
Study design, Data Collection, Manuscript writing, final review.

Mumtaz Hussain Satti
Study design, Data Collection, Manuscript writing final review.