

Scientometric Profile of Presbyopia in Medline Database

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Abstract - The present study attempts on the Scientometric analysis of articles on Presbyopia in Medline Database during 2010-2014. The present study is based on 3356 references appended to 123 articles contributed on MEDLINE DATABASE. The findings revealed various aspects of the characteristics and patterns of contributions of the study.

Keywords: Scientometric; Medline Database; Presbyopia

Introduction:

Scientometric is one of the most important measures for the assessment of scientific productions. Macias-Chapula argues that "Scientometric indicators have become essential to the scientific community to estimate the state-of-the-art of a given topic" (quoted In Lolis et. al. 2009). Scientometric is related to and has overlapping interests with Bibliometric and Informetric. The terms Bibliometric, Scientometric, and Informetric refer to component fields related to the study of the dynamics of disciplines as reflected in the production of their literature (Hood & Wilson, 2001).

Review of Literature:

Bala and Singh (2014) analyzed 316 scholarly communications published in the Indian journal of biochemistry & bio-physics. The analysis cover mainly the number of articles from documents cited, and most cited journals etc. study revealed that single author contributed 18 (5.7%), while the rest of 162 (51.3%) articles were contributed by multi-authors. the contributions in this journal from India are slightly more than those from the other countries.

Khaparde & Pawar (2013) studied the authorship pattern and author's collaborative research in Information Technology with a sample of 17917 articles collect from LISA during 2000-2009. The average number of authors per article is 1.80. In the study the degree of collaboration (C) during the overall 10 years (2000-2009) is 0.71 but the year wise degree of

collaboration is almost same in all the years of mean value 0.49. According to 10 years of period, the multi- authorship articles are higher and predominant on single authorship. The study found that the researches in Information Technology are keep toward team research or group research rather than solo research.

Khaparde V S (2013) the paper studied the Bibliometric Analysis of Research Publication of Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, from 1975 to 2012. It analyzed all the 774 research publications from the 144 journals. It examines year-wise distribution of papers, authorship pattern, journal in which author publish, it revealed that the number of publications has increased consistently from the year 1975 to the year 2012. 25% of the total publications have been made in 2009, 2010, and 2011. And the majority of the publications are made with 4 authors. And also the majority of the research paper published in journal of heterocyclic chemistry.

Alhamdi, Khaparde & Kanekar (2014) they attempted on bibliometric analysis of ten volumes (57-66) in the field of journal of Documentation. It is based on the references appended to International Journal of "Journal of Documentation" during 2001-2010. The present study is based on 15150 references appended to 364 articles contributed by the authors in Journal of Documentation. It was found that Journals Citations are more in number than other citations. In Authorship pattern it was found that Solo Researchers are Predominant than Collaborative Researchers. The extent of collaboration was not much popular among the Journal of Documentation. The mean relative growth for articles and citation in the first five years 2001 to 2005 is reduced according to the last five years 2006 to 2010. The value of group co-efficient (gp) was only 0.46. It was seen that researchers cited latest documents. Universities are the major contributors. The study shows the UK, USA, Finland, and Denmark, have the majority of most cited records in Journal of Documentation. Out of 364 articles there are 175 articles have pages length from 11 to 20.

Fawaz Alhamdi and Vaishali Khaparde (2015) Analyzed Authorship pattern in cloud computing research in LISTA . They collect 108 articles during the year 2009 to 2013. In this study The number of contributions found to be the highest is 24 in the year of 2012. The rate of growth of publication highly decreased from the rate of 0.693 in 2010 to 0.193 in 2013. Whereas the corresponding the Doubling time for different years gradually increased from 1 in 2010 to 3.95 in 2013.

Ambhore and Khaparde (2014) studied 57 Open Access Online Journal on Genetics as found in DOAJ. It is observed that U.S. was in 1st rank in publishing 15 e-journals followed by U.K. English is the most common communication language for scientific community. Four e-journals on Genomics also published simultaneously in English, French, German and Turkish languages. Based on results the study suggested that Research scholars, scientists and Professionals should browse the DOAJ site and access the free online journals on their subject areas and also suggested that scientists and Research scholars should publish their research work in online open access journals for wider visibility of their research work and for greater impact factor and citation index.

Tupe and Khaparde (2016) stated in study Mapping of Physics Periodicals: A Bibliometrics Study. Total 2131 periodicals in Physics published in 50th edition of Ulrich Periodical Directory, 2012 was considered to the present study. In this study 77 Countries published 2131 Physics Periodicals. Periodicals of different continents, at the comprehensive level, the European continent stood in the first place with the highest publication 973 (45.66%) and

other periodicals published in other five continents. The State wise distribution of periodicals 48 Periodicals Published in India. Kerala is at the top position with highest 13 (27.08%) periodicals.

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Boell, 2007 used scientometric method of analysis scientifically from academic disciplines, journals plays an important role in disseminating findings of research among the disciplinary community members. In this study he analyzed six databases focusing on LIS literature: INFODATA, Current Contents, Library and Information Science Abstracts, Library Information Science Technology Abstracts, Information Science and Technology Abstracts, and Library Literature and Information Science, and listed the core journals in areas of LIS. Journals were also ranked by the number of occurrences in multiple databases in order to identify 'core' publications. The number of journals overlapping among databases is estimated and a matrix giving the overlap is visualized using multi-dimensional scaling. In his study he prepared a comprehensive master list of 1,205 journals publishing articles of relevance to LIS. About 968 active journals were published in English, in which one third of the journals and published from the US and another one third from the UK and Germany. Nearly 16% of all journals are open access, 11% have ISI/JIF, and 42% are peer reviewed. Fifteen core journals are identified and a list of the top fourteen journals published in Germany was reported. The aim of compiling a comprehensive list of LIS journal was achieved by author.

Medline Database:

According to MEDLINE (Medical Literature Analysis and Retrieval System Online, or MEDLARS Online) is a bibliographic database of life sciences and biomedical information. It includes bibliographic information for articles from academic journals covering medicine, nursing, pharmacy, dentistry, veterinary medicine, and health care. (Rogers, Frank B. 1964) MEDLINE also covers much of the literature in biology and biochemistry, as well as fields such as molecular evolution Compiled by the United States National Library of Medicine (NLM), MEDLINE is freely available on the Internet and searchable via PubMed and NLM's National Center for Biotechnology Information's Entrez System (Para,1& 2).

Presbyopia:

Presbyopia is a condition associated with aging of the eye that results in progressively worsening ability to focus clearly on close objects. Symptoms include a hard time reading small print, having to hold reading material farther away, headaches, and eyestrain. Different people will have different degrees of problems. Other types of refractive errors may exist at the same time as presbyopia. Presbyopia is a natural part of the aging process. It is due to hardening of the lens of the eye causing the eye to focus light behind rather than on the retina when looking at close objects. It is a type of refractive error along with nearsightedness, farsightedness, and astigmatism. Diagnosis is by an eye

exam. Treatment is typically with eye glasses. The eyeglasses used have higher focusing power in the lower portion of the lens. Off the shelf reading glasses may be sufficient for some (Para 1, 2 & 3).

Objectives:

The present study deals with the scientometric analysis of different E-journals as per the following parameters.

1. To find out the year wise distribution of contributions.
2. To analyze the authorship pattern of contributions.
3. To find out the authorship pattern of contributions (Year-Wise).
4. To examine the institution- wise distribution of contributions.
5. To find out the country wise distribution of contributions.
6. To analyze the type-wise of publications.
7. To find out the year wise of average citation and pages of contributions
8. To identify the mail domain of contributors.
9. To examine the references wise distribution of articles.

Data analysis:

The present study is based on 123 articles of “Presbyopia” subject during 2010 – 2014 in the Medline Database.

Table no. 1. Distribution of contributions (Year-Wise)

Year	No. of contribution	Percent
2010	31	25.20
2011	20	16.26
2012	22	17.89
2013	33	26.83
2014	17	13.82
Total	123	100.00

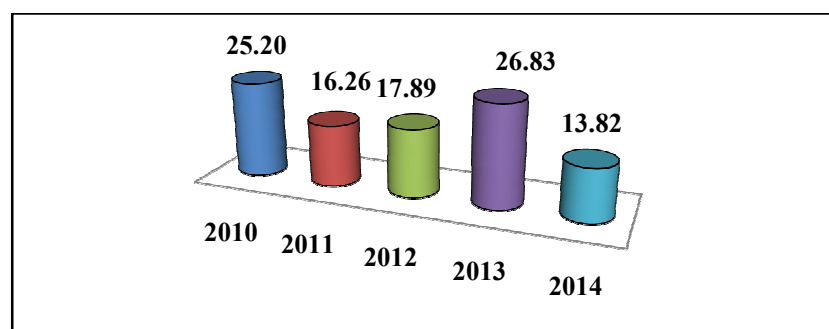


Figure No.1 Distribution of contribution's (Year -wise)

The distribution of contributions is shown in table No. 1 & figure no.1. Out of the total 123 contributions, the majority 33 (26.83%) of contributions were contributed in 2013, while the minimum contributions (13.82%) were contributed in 2014.

Table No. 2. Authorship pattern of contribution

Sr.	Authorship pattern	No. of contribution	Percent
1	Single author	16	13.01
2	Two authors	15	12.20
3	Three authors	20	16.26
4	Four Authors	23	18.70
5	More than Four Authors	49	39.84
Total		123	100.00

The distribution of authorship pattern is given in the table no.2. it revealed that the majority of the contributions were contributed by multi-authors with 107 articles.

Table No. 3. Authorship pattern of contribution (Year- Wise)

Year	Single Author	Two Authors	Three Authors	Four Authors	More than Four Authors	Total
2010	4	3	6	8	8	29
2011	4	3	5	4	10	26
2012	3	0	4	7	11	25
2013	4	8	4	1	11	28
2014	1	1	1	3	9	15
Total	16	15	20	23	49	123

Table no. 3 shows the year- wise of authorship pattern of contributions during the period of five years. The maximum 29 of publications contributed in the year of 2010, followed by 28, 26, and 25 of publications in the years of 2013, 2011, 2012 respectively. Whereas the minimum 15 of publications contributed in the year of 2014.

Table No. 4. Institution Wise Contributions of Distribution (Institution-Wise)

Year	University	Institution	Research Center	College	Not Mentioned	Total
2010	17	3	1	1	9	31
2011	10	4	2	0	4	20
2012	12	4	1	1	4	22
2013	24	2	2	2	3	33
2014	14	1	0	0	2	17
Total	77	14	6	4	22	123

Table no. 4 shows distribution of institutions wise. It was seen that universities contribution were maximum (77), followed by institutions with (14), research centers with (6), and 4 contributions were contributed by the colleges.

Table No. 5. Country wise distribution of contributions

Sr	country	Frequency	Percent
1	USA	23	18.70
2	UK	19	15.45
3	Australia	15	12.20
4	German	6	4.88
5	India	6	4.88
6	Croatia	5	4.07
7	Japan	4	3.25
8	Greece	3	2.44
9	Netherlands	3	2.44
10	New Zealand	3	2.44

11	Spain	3	2.44
12	Brazil	2	1.63
13	China	2	1.63
14	Italy	2	1.63
15	Nigeria	2	1.63
16	Switzerland	2	1.63
17	Turkey	2	1.63
18	Ariz	1	0.81
19	California	1	0.81
21	Pakistan	1	0.81
22	Portugal	1	0.81
23	Not available	17	13.82
	Total	123	100.00

Table no. 5 shows the country wise distribution of contributions which indicates that the majority of the contributions were contributed by USA 23(18.70%) followed by UK with 19 contribution with (15.45%) and Australia 15 contribution with(12.20%). German and India had each contributed two publications. While the Ariz, California, Pakistan, and Portugal had each contributed one publication. Also there were 17 papers had not mentioned their countries.

Table no. 6. Types of publications

Year	Article	Editorial	Review	Total
2010	30	0	1	31
2011	19	1	0	20
2012	22	0	0	22
2013	29	3	1	33
2014	17	0	0	17
Total	117	4	2	123
	95.12	3.25	1.63	100.00

Table no. 6 shows the types of publication. Out of the total 123 contributions, the majority 117(95.12%) of publications were articles, and the minimum 2(1.63%) of publications were reviews.

Table No. 7.Average pages per Article (Year-Wise)

Year	No. of article	Total pages	Percentage
2010	31	218	21.63
2011	20	152	15.08
2012	22	234	23.21
2013	33	255	25.30
2014	17	149	14.78
Total	123	1008	100.00

Table no. 7 shows the year wise of average pages per contribution. It was seen that the maximum 255(25.30%) of pages were covered in the year of 2013. While the minimum149 (14.78%)of pages were covered in the year of 2014.

Table No. 8. Domain of E-mail Id of the contributors

Sr	Mail domain	Frequency	Percent
1	Educational	9	7.32
2	Commercial	7	5.69
3	Gmail	3	2.44
4	Yahoo	3	2.44
5	Not Mentioned	61	49.59
6	others	40	32.52
Total		123	100

It can be observed from table no. 9 that there were 9(7.32%) of authors used the educational domain, seven authors used the commercial domain, three authors used each the Gmail domain and yahoo. There were 61(49.59) of authors had not mentioned their mail domain, while the 40(32.52) of authors used different single mail domain.

Table no. 9. Number of references wise distribution of the articles

Year	Web Ref	Print Ref	Total	Percent
2010	4	766	770	22.94
2011	0	532	532	15.85
2012	2	839	841	25.06
2013	7	740	747	22.26
2014	7	459	466	13.89
Total	20	3336	3356	100.00

Out of 123 contributions, it is seen that the maximum references 841(25.06%) in the year of 2012, while the minimum references were 466 (13.89%) in the year of 2014. It was seen the maximum references used print references i.e.3336; whereas 20 references were web references.

Findings and Conclusion:

The findings are based on the analysis of collected data appended in 123 articles and 3356 references in Presbyopia on Medline database.

1. The distribution of contributions is shows in out of the total 123 contributions majority of the contributions i.e. 33 (26.83%) contributions were contributed in 2013 were as minimum contributions i.e. 17 (13.82%) contributions were contributed in 2014.
2. "Majority of the contributions are contributed by more than four author".
3. Authorship pattern of contributions (year- wise) during the period of five years. Maximum publications contributed by 29 in the year 2010, and minimum publications contributed by 15 in the year 2014.
4. Distribution of institutions wise contribution year wise. It was seen that university wise contribution were maximum (77) than institution wise (14) and (4) contributions were contributed by the colleges.
5. Country wise distribution of contributions which indicates that the majority of the contributions were contributed by USA (17.89%) were as the minimum contributions were contributed by other countries i.e. (0.81%) respectively
6. Types of publication year wise. The total 123 contributions majority (95.12%) of the citations is the article citations and minimum (1.63%) are review citations

7. Average pages (per year & per contributions). The maximum pages were covered in the year of 2013 i.e. 255 (25.30%) & minimum pages were covered in the year of 2014 i.e. 149 (14.78%).
8. Websites on education maximum 9 (7.32%) out of 123 of the articles have mentioned their email address in the paper. Followed by Gmail domain of email 3 (2.44%) then yahoo domain of email the 3 (2.44%).
9. It was seen the maximum references used print references i.e.3336 whereas 20 references were web references.

Conclusion:

Scientometric analysis is the major techniques of bibliometric which is used in the further study. Considering published literature present study has used quantitative method. Scientometric is relatively new subject of information. It helps to evaluate information & to handle the information in libraries and information centers by the quantitative analyzed information. It deals with the mathematical and statistical analysis. This is an umbrella term used for many studies where quantitative method or techniques are used to investigate various aspect of written document.

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