

A Bibliometric Study on Growth of Research in Plastic Surgery – An Analytical Review 2000-2004

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Abstract: - *Bibliometric is a technique or a tool of information management, which is also called quantitative science. In the field of Plastic Surgery, Bibliometric as it is presently known is of recent origin, though its roots could be traced to a study in 1967. Since then it has come a long way and attain much importance and significance for research in plastic surgery. Bibliometric has practices applications in the evaluation of research operation and survey through statistical techniques to make the quantitative analysis possible. It is also useful in the study and measurement of publication pattern of different form of literature on one subject or other and also useful in the study of productivity of citation of articles. The Present study on SCImago Journal Rank (SJR indicator) data base shows that how many articles published in a particular field of Plastic Surgery subject and also shows that how many Articles, References, Citation, Un cited document, International collaboration and cited document in the field of Plastic Surgery. The present study will helps to indentify the research growth and the analytical review of research.*

Introduction

Bibliometrics is a statistical analysis of books, articles and other publications. Bibliometric analysis use data on numbers and authors of scientific publications and on articles and the citations therein (and in patents) to measure the “output” of individuals/research teams, institutions, and countries, to identify national and international networks, and to map the development of new (multi-disciplinary) fields of plastic surgery research that provides access to quality controlled Open SJR Journal Rank. The aims of SJR is to cover all open access scientific and scholarly journals that use an appropriate quality control system, and it will not be limited to particular languages or subject areas. The aim of the Directory is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact originally

Review of Literature

P. L. K. Gross in 1927 and H. H. Henkle in 1938 on biochemical literature together with later works by S. R. Ranganathan (1969) and Solla Price (1976) belong to the foundational literature of bibliometrics (Ranganathan proposed the term 'librametrics' in 1948). In European scientific journals, bibliometric investigations began to be popular in the 1970s and 1980s. Hungary, Eastern Germany and Switzerland belong to the countries, which early started to do research in bibliometrics

Sahora and Khanna (2010) evaluated author affiliation, the Journal of Veterinary Medical Education from 1974 to 2004 revealed a similarly high percentage of articles with authors who were associated with academic institutions (94% of the 168 articles included in the analysis) (Olson, 2011). The Journal of Veterinary Medical Education is the official publication of the Association of American Veterinary Medical Colleges and aims to encourage the improvement of veterinary medical education (Olson, 2011). Thus, it is not unexpected that the majority of articles published in this journal were authored by persons with an academic affiliation. The content analysis of this journal also showed a significant 21 increase in the median number of authors per article over time.

Methodology

The numbers of research publications are collected the web ID www.scimagojr.com from 2000 to 2014. In this collection Plastic Surgery departments are there. Plastic Surgery gives new research paper in each year. For SJR Website ranking of Journals and the help of this website we collect the research publications for plastic surgery. All the research publications are maintained in the medical related department, all over the world. These records are verified Scopus and Web of Science sources.

Result & Discussion

SCImago Journal and Country Rank (SJR) gives the following parameters of these Plastic Surgery topics for the period of 2000-2014 website <http://www.scimagojr.com> total references, total cites, citable documents and international collaboration, and number of documents with un citable references. The following figure 1 No. of Articles published in the year of 2000-2014. The total number of 16142 contributions during the period has been recorded for the present study. Figure 1 shows the details of the articles in the issues form the year 2000-2014. The number of articles published in 2014 was the maximum 1648 articles. The minimum number of articles were published in 2000 only 703 articles. The journal publishes on an average of 1076 articles per year.

Figure 2 shows that majority of the references appeared under 2006(3150.47). The next position is taken by year of 2011 (2207.34), 2010 (2046.43) this is followed by 2002 (1836.45) and 2013 (1830.34) references input in the Plastic Surgery articles.

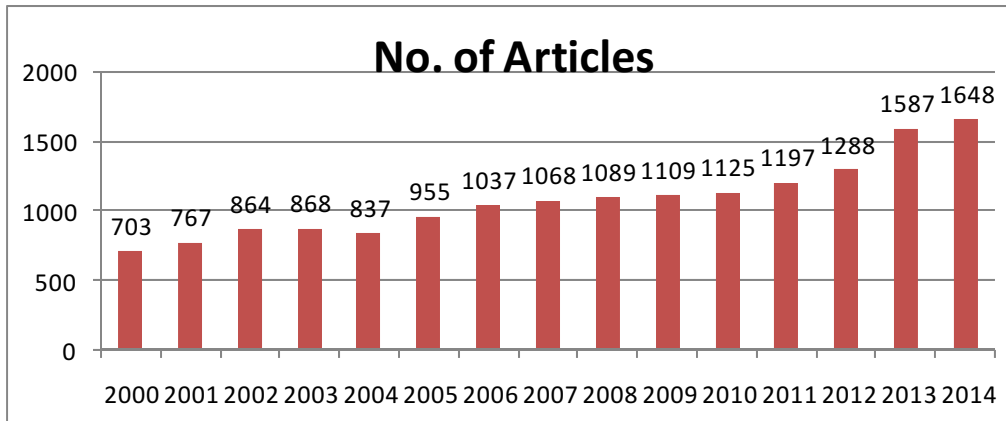


Figure 1 No. of Articles Published 2000-2014

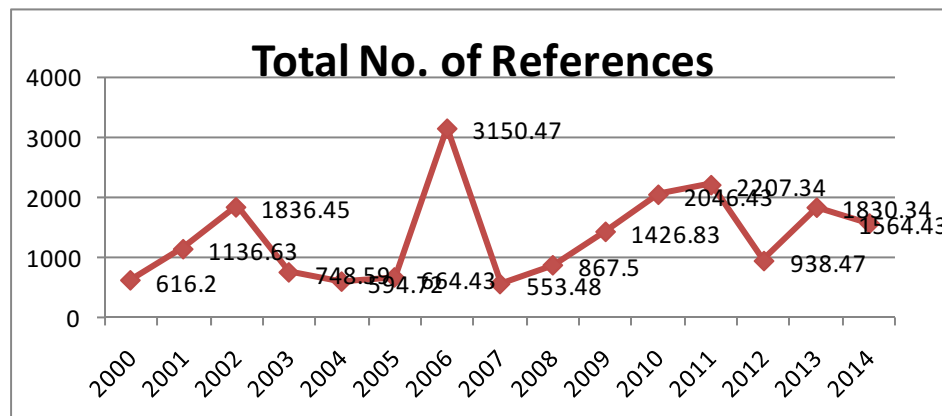


Figure 2:- No. of References Published 2000-2014

Distribution of various forms of cited documents are given in the table 1. They include journals, books, reference books, dissertations, seminar / conference proceedings etc. Table 1 showed that majority of the contributors preferred journals as the source of information which occupied the top position with the highest number of Citations 2480.21 (2014), Self Citation 372 (2013), Cited Document 1781(2014), Un Cited Document 2434(2014) of the total distribution of citation .

Table No. 1 Distribution of Citation

Year	No. of Citation	No. of Self Citation	No. of Cited Document	No. of Un Cited Document
2000	1251	134	644	1270
2001	1245	128	679	1438
2002	1331	85	733	1589
2003	1454	156	779	1707
2004	1663	169	850	1710
2005	1920	186	933	1636
2006	1346.05	208	1043	1664

2007	1202.15	262	1059	1817
2008	1458.24	274	1212	1895
2009	1595.36	267	1296	1942
2010	1935.35	218	1381	1929
2011	1945.35	326	1377	2000
2012	2054.27	358	1461	1980
2013	2324.31	372	1662	2101
2014	2480.21	357	1781	2434

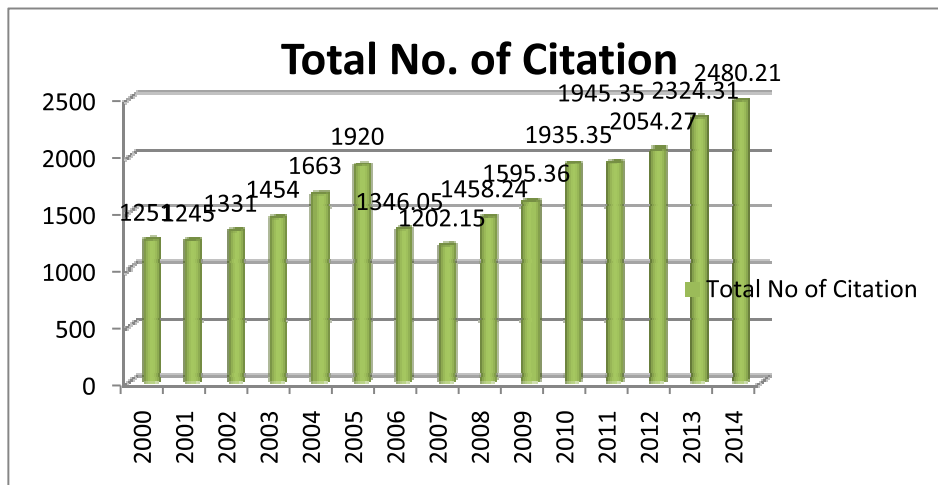


Figure 3:- No. of Citation 2000-2014

Figure 3 shows that majority of the citation appeared under 2014(2480.21). The next position is taken by year of 2013 (2324.31), 2012 (2054.27) minimum number of citation 2007 (1202.15) citation input in the Plastic Surgery articles

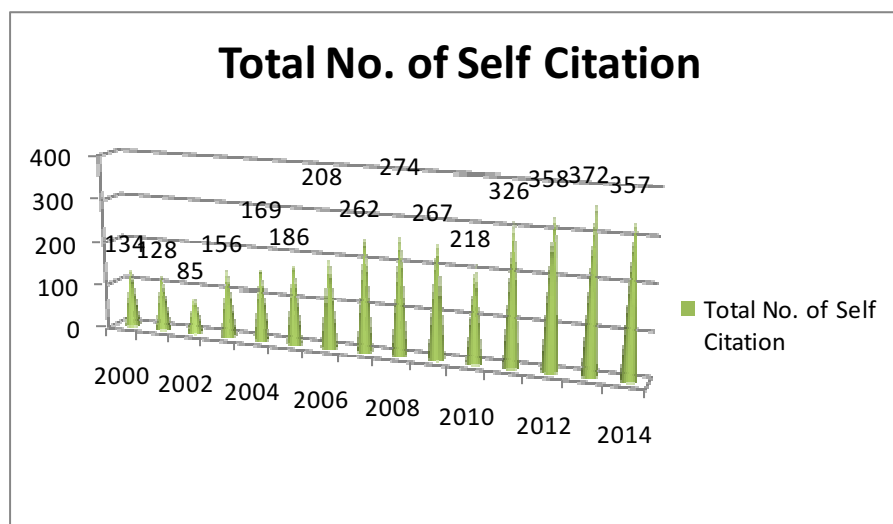


Figure 4:- Total No. of Self Citation

Figure 4 shows that majority of the self citation appeared under 2013(372). The next position is taken by year of 2012 (358), 2014 (357) minimum number of self citation 2002 (85) citation input in the Plastic Surgery articles.

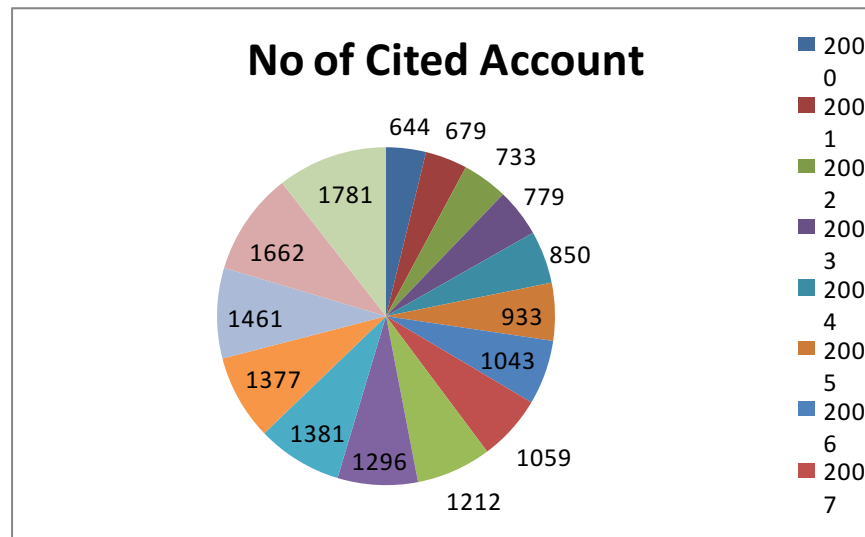


Figure 5:- Total No .of Cited Account

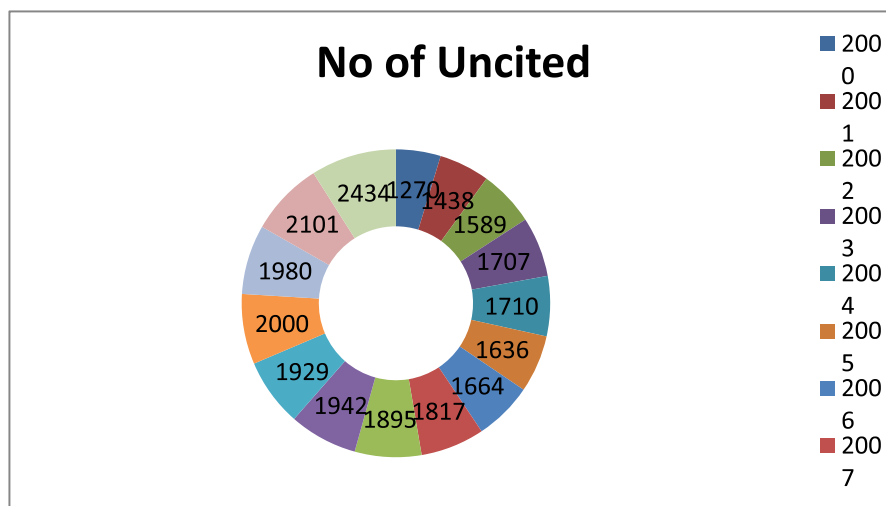


Figure 6:- Total No. of Un cited Account

Figure 5 & 6 displays number of cited and un cited articles. It revealed that numbers of cited document as well as average number of references per article have been increasing 2000(644), where as it gradually decreases in 2014(1781) as cited account, followed by number of un cited document average number of un cited document in the year of 2000(1270) and maximum year 2014(2434).

Figure 7 an important topic, collaboration also is mentioned in Plastic Surgery Studies. A common approach is to use citation network analysis to identify articles. The benefits and

challenges of collaborative research in plastic surgery also are discussed. Some researchers find the collaboration plastic surgery with collaborate with English-speaking countries, like Canada, England and Australia international collaboration in plastic surgery has not been adequately studied, especially from the macro-level perspective. This paper, based on bibliometric data of periods from 2000-2014 plastic surgery technology, aims to observe the status and trends of international collaboration in plastic surgery from the macro-level perspective and explore its influence on citation impacts.

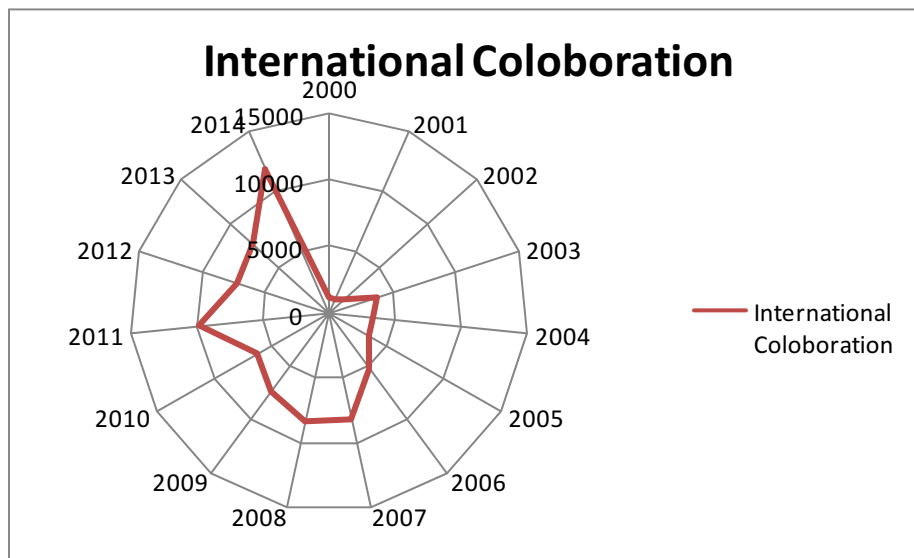


Figure 7:- International Collaboration with Plastic Surgery

Conclusion

This analytical study is giving us a deep insight into the use of theoretical methods and results of bibliometrics in the practical field of answering the queries and needs of users of the library. There is scope for further research on these lines by extending the bibliometric methods used, nature of queries answered, and covering users from more disciplines. Although we have covered the field of plastic surgery we feel the methods described are applicable to other fields also.

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