



Research Evaluation of Indian Journal of Cancer: A Bibliometric Study

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Abstract

This study highlights the research evaluation of bibliometric study of Indian Journal of cancer for the time frame of 2003-2012. The data was taken from the archives of the journal through online. This study highlights the evaluation of research carried out by the oncologist doctors. The analysis covers on distribution of articles patterns, length of articles, authorship patterns, and citation distribution. The study has helped in finding out the publication published during the past ten years. The findings shows that 625 articles were published and joint author contribution was 569 (91.04%) and rest was the single author 56(8.96%). The mathematical formula was used to find the degree of collaboration of authorship in the Indian journal of cancer. The study helps in finding out the strength and the weakness of the publication and necessary steps recommended for further development.

Keywords: Bibliometric, research output, authorship pattern, citation analysis.

Introduction

Bibliometric analysis is a tool of science, quantitative analysis, the journal articles published in a particular journal. This study focuses on Indian journal of cancer. This journal was established in the year 1963. This is early periodical servicing the doctors needs of all the specialities of oncology in India. Its international repute is recognised by its indexing and bibliographic database including MEDLINE, Index Medicus, EMBASE and Biological Abstracts. The frequency of this journal is quarterly and articles are submitted online. The present study highlights about the various collections of journal articles in Indian Journal of Cancer.

The Indian Journal of Cancer has launched its new website. The features of the new website as mentioned in the homepage include: i. Free full text availability of articles in HTML as well as PDF. ii. Direct link to abstracts and full text from the cited references. iii. Link from text of articles to various databases and search engines. iv. Facility to submit comments on articles. v. Email notifications on new issue release. vi. Statistics of articles download and visits. vii. Better user interface. viii. Exhibits based on Open URL, Dewey Classification Metadata and other international standards.

This paper shows the ontological sciences in India. The literature highlights the needs of all Specialties of oncology in India. The journal utilizes most advanced tools for its management including an electronic system for manuscript submission and review.

Literature Review: This paper highlights in analysing the research output performance of the agricultural scientists on agricultural science subject. The author, Thanuskodi 1, highlights about the merits and weakness of the journal. The methodology that is applied in the present study is bibliometric analysis, the

bibliographical detail were computed in the computerised database and is created for further analysis. The author, Thanuskodi 1, has used the formula given by K. Subramanian for determining the degree of collaboration in the quantitative terms. Author 1, concluded that the Indian journal of agricultural research is highly preferred journal for communication by the agricultural scientists. Although several studies have used cancer research performance in Indian European union company studies of European Union's with that of other countries of similar population are not available. In this paper author Andrea 2, examines about the performance of cancer research from the year 2000 to 2008 between EU 27 and 11 other countries with over 100 million inhabitants. The author has examined about 143 journals relating to oncology access through Scopus. Publications were attributed to countries using published coding procedures. The findings the author 2, highlights the study in terms of number of cancer publications which depicts USA in the leading position. The next large countries of the developing world had a poor record of cancer publication as compared to USA. The author 2 has used Medline as a reference source and Scopus to access its claims to archive all its publications indexed in Medline after 1995. The impact factor of 2008 was used. The author 2, concludes that USA had over taken European unions with respect to member of cancer publications and journal impact.

The evaluation of research involves making companies between the output from different countries, regions, universities, departments etc. The author Grant Lewison³, in his paper titled definition of cancer research, journals, titles, abstracts or keywords. This paper analyses about the output of cancer research for which the author 3, used three filters for identifying the research output namely journal papers, journal titles and abstracts. The author had used latest version of cancer research filler labelled ONCOL. For deriving the results the author 3, has used the calculations of precision and recall values.

Using bibliometric analysis to update cancer research policy and spending paper authored by Richard Sullivan, Seth Eckhous⁴, for European cancer research managers forum speaks about the causes, preventions, diagnostics and treatment of cancer. The author Richard Sullivan⁴, in his chapter addresses about the impact of cancer on low and middle union countries. It is also seen that the previous medical reports of global forum for health research has drawn attention to 10/90 gap that indicates the imbalance between the world's biomedical research portfolio and global burden of diseases. The author 4, inferences diseases of rich received greater findings for research than diseases of the poor. For their effective study the author suggested the use bibliometric analysis to track the changes and to record the progress of biomedical research in the respective countries.

There were various studies using bibliometric analysis in different fields one such is referred to annals of library and information studies the author Ramesh Pandita⁵, presents an analysis which covers the area like article distribution pattern, authorship pattern, and geographical distribution of authors. Further it highlights that 310 articles were published during the period 2002-2012. The data was tabulated as per articles contributed, highlighted in their standing order. The collected data was analysed using excel format for arriving at percentage and average. Various findings were studies based on the tables designed for collection of data that there is a growing trend among the researchers to carry out research mainly on joint authorship. This in turn unveils that the fact that how far the journal will have international repute.

In the present time there has been a significant growth in research literature on oncology in India. The author Swapan Kumar Patra, Partha Bhattacharya⁶, in their paper bibliometric study on cancer research in India studies about the growth trend of cancer literature in India. The author 6, has downloaded from national centre for biotechnology information (NCBI) and pubmed (Published medical literature) is an online version of medline is a free internet access. The author has used Endnotes for downloading data. The analysed data was represented

namely growth of literature, country wise distribution of literature, document type and authorship pattern. The author 6, concludes that bibliometric analysis of Indian cancer research as published in NCBI, Pub med. The study shows that there are around 500 literature published per year with the above study and literature has helped in analysing the data.

With the above studied literature, the present paper has been carried out to find the oncology study in Indian journal of cancer.

Objective of the Study: i. To study the number of author contribution of the journal during the study period. ii. To categorise issue wise distribution of articles. iii. To classify type of authors contribution. iv. To study the length of article published. v. To highlight the year wise distribution of citations.

Methodology

Methods used in the research study is the bibliometric analysis, that has helped in research study of bibliographic content, features of the journal articles and citation analysis of each articles published in journal of cancer. The study year is observed from 2003-2012. This contains the research output for the period of 10 years and a collection of 625 articles. The collected data is computed in the excel sheet and the percentage was drawn for the same.

Results and Discussion

Analysis and Discussion: The various data analysed were authorship pattern, contribution of articles periodically, length of paper contributed and year wise distribution of citations. The time frame of the study was from 2003 to 2012 journal articles. The analysed data was represented in the form of tables with percentage. The analysis also represented the degree of collaboration in the Indian journal of cancer.

The analysis is represented in form of tables and figures:

Table-1
Contribution of Articles Periodically

Period	Journal Vol No.	Journal Issues No.	Total Number Contributors	Article Percentage (%)
2003	40	4	18	2.88
2004	41	4	36	5.76
2005	42	4	40	6.40
2006	43	4	29	4.64
2007	44	4	29	4.64
2008	45	4	55	8.8
2009	46	4	87	13.92
2010	47	4	119	19.04
2011	48	4	139	22.24
2012	49	4	73	11.68
		Total No.	625	100%

Indian journal of cancer has published 625 articles during the period from 2003-2012. Indian journal of cancer on an average has published less than or more than 50 research articles per year. The above table 1 shows the highest number of articles published in the year 2010 is 139 articles and minimum in the year 2003 with 18 articles.

139 followed by vol 47 with that of 119 articles. The least is the vol 40 with 18 articles.

The table – 3 indicates among journal 625 articles, two or more author (two or more) has contributed 569articles (91.04%) while the single author accounts to 56 articles that is 8.9% of the total contributed articles.

Table - 2 highlights the contribution of articles which indicates articles of vol 48 shows the highest number of articles that of

Table-2
Issue Wise Distributions of Articles

Journal Vol No.	1	2	3	4	Total Articles
40	0	7	7	4	18
41	9	8	10	9	36
42	12	9	9	10	40
43	8	7	8	6	29
44	7	7	8	7	29
45	10	17	15	13	55
46	18	20	26	23	87
47	27	34	36	32	119
48	38	37	36	28	139
49	29	10	12	12	73
Total	158	156	167	144	625

Table-3
Single Authors, Multiple Author Statistics

Authorship	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%
Single	-	-	3	1	2	7	10	13	10	10	56	8.96
Two or More	18	26	37	28	27	48	77	106	129	63	569	91.04
Total	18	36	40	29	29	55	87	119	139	73	625	100

Table-4
Length of Paper Contributed

Length	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%
1-2	1	5	8	2	7	11	22	31	23	15	128	20.48
3-4	8	15	16	7	10	27	41	50	67	27	258	41.28
5+	19	16	16	20	12	17	24	38	46	31	239	38.24
										Total	625	100%

Table-5
Research period wise distribution of citations

Research Period	Total Number of Citations	Total Percentage %
2003	140	6.60
2004	371	17.50
2005	270	12.74
2006	241	11.37
2007	152	7.17
2008	209	9.86
2009	339	15.99
2010	260	12.26
2011	117	5.52
2012	20	0.94

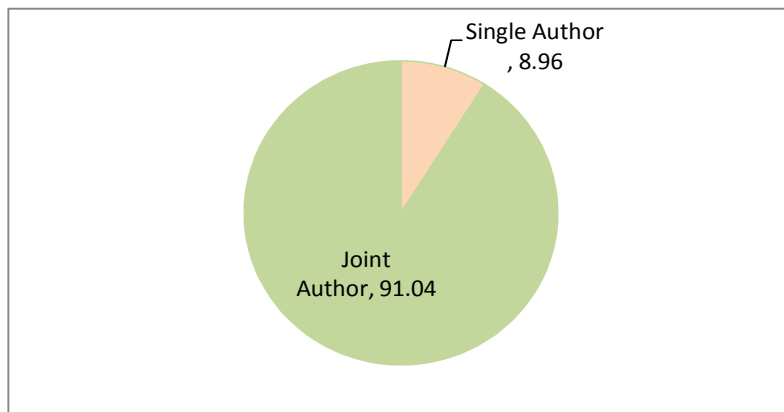


Figure-1
 Authorship pattern year wise

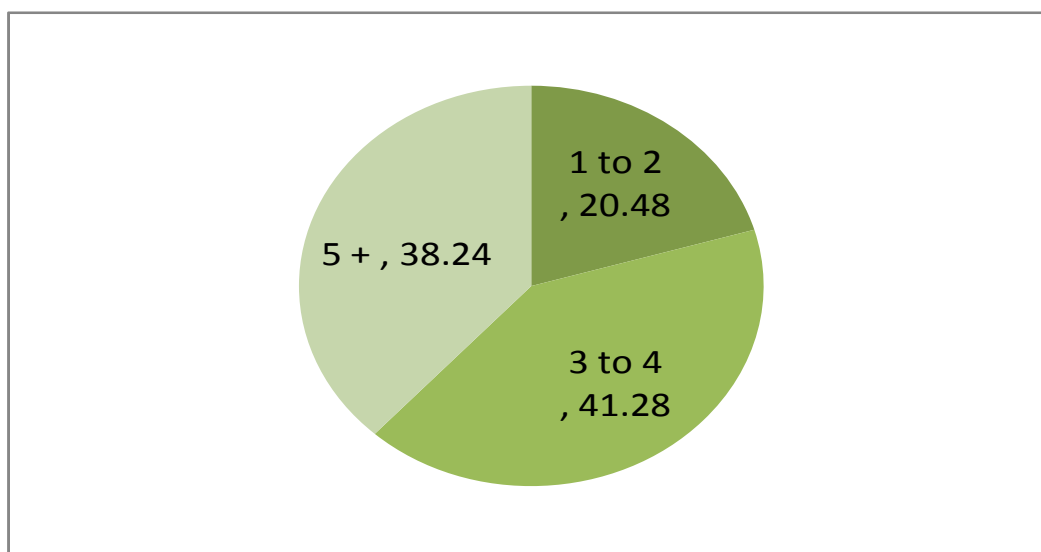


Figure-2
 Length of paper contributed

Degree of Collaboration in Indian Journal of Cancer: The formula formulated by K. Subramanian is useful for evaluating the degree of author's contribution in quantitative terms. This study has used the same formula as:

$$C = \frac{NM}{NM + NS}$$

Where C = Author contribution, NM = Number of two or more author papers, NS = Single author paper,

In this study: NM = 569, NS = 56

$$C = \frac{569}{569 + 56} = 0.9104$$

The degree of contribution is 0.9104 which indicates the high contribution of multi author.

Table 4, figure-2, highlights that 258 (41.28%) have the total length of articles 3-4 pages followed by 239 (38.24%) had the length of articles 5 plus pages.

Table - 5 shows the highest number of citations 371 (17.50%) during the period 2004 followed by 339 (15.99%) citations in the year 2009 the least was in the year 2012 (0.94%).

Conclusion

Bibliometric analysis is a literature using various statistical tools, contributions, citation analysis for journal of research articles. It is an important tool in the area of information retrieval. The journal has published 625 articles for the period between 2003-2012. The maximum number of contributions was from two or more authors with 569 (91.04%). It is seen that there is a highest number of citations in the year 2004 371 (17.50%). Indian journal of cancer utilizes the latest electronics systems tools for its manuscript submission and review.

The journal research articles end user should not only be the oncologist professionals, but also the common man to learn and get awareness about what is cancer, its types, causes, effects and its medications.

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