

Bibliometrics Analysis of Indian Journal of Chest Diseases and Allied Sciences (2000-2004)

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Abstract

Bibliometrics is an emerging thrust area of research in the field of Library and Information Science. Journal literature is an important source of information. To disseminate new ideas for recent developments in any area of research and development work, study of the papers published in a particular journal reveals the status and trends of research in the subject in which the journal is published. Bibliometrics studies have been used to identify the pattern of publication, authorship, and citation analysis. This study has been carried out the Bibliometric analysis of the journal "Indian Journal of Chest Diseases and Allied Sciences" from 2000-2004. The trend of publication such as authorship productivity, year-wise contribution, category-wise publications and distribution of authorship pattern in category-wise has been studied.

Keywords: Authorship Productivity, Category-wise Publications, Distribution of Authorship Pattern in Category-wise, Year-wise Productivity

1. INTRODUCTION

The Bibliometric analysis is the quantitative descriptions of literature and helps in the measurements of the patterns of all forms of recorded information and their producers. It has extensive applications in the field of library science particularly with regard to studying the trends in a subject.

Bibliometrics as a sub-discipline information science is known to have been applied by Cole and Eales in 1917 [1], a subsequent study was conducted by Hulme in 1923 [2]. Both these studies were designated "statistical bibliography". The term bibliometrics was perhaps first coined by Pritchard (1969) [3]. However, it may be noted have that the term bibliometry was coined by Dr. S.R. Ranganathan in 1948 during a discussion in the ASLIB conference held in Lamington Spa and the terms was used more or less in the same sense as bibliometry in India for quite some time. Roy has defined bibliometrics as a study of the process of information use by analyzing the characteristics of documents and their distribution by statistical methods [4]. According Sengupta *et al*, the bibliometrics is the

Organization of classification and quantitative evaluation of publication patterns of all macro and micro communications along with their authorship by mathematical and statistical applications and calculations [5].

Other terms such as naukometrija, scintometrics, informatics and librometrics are also widely used. Over the past seventy years, a sizeable body of literature dealing with Bibliometrics has developed. Bibliometrics was first applied to evaluate for collection development in libraries. Its value has been recognized and extended to the study of the structure of literature in larger fields encompassing information science. Bibliometric analysis of scientific publications is an important aspect of research endeavor in information science in recent years. Science is cumulative and scientific research is a continuing process when an area of study is growing new view or facts appear. This knowledge building process promotes the establishment of infield theory.

2. AREA OF THE STUDY

Chest diseases are quite common in India. The diseases are dealt by general physicians even today in

India. But specialization on chest diseases is at a growing rate in India. It is most important to satisfy the information requirement of this specialist in a well versed manner by information scientist. An expert chest specialist can cure the chest without putting knife on it. It will reduce the risk for patients as well as the cost of treatment. The information needed for the chest specialist in India has been met by mainly from developed countries medical journal which carries the needed information for the chest specialist in India is "Indian Journal of Chest Diseases and Allied Sciences".

Indian Journal of Chest Diseases and Allied Sciences (ISSN 0377-9343) is published quarterly by the Vallabhai Patel Chest Institute, University of Delhi, and the National College of Chest Physicians (India). The journal covers the clinical and experimental work dealing with all aspects of chest diseases and allied science. It publishes original articles, review articles radiology forum, case reports short communication, book reviews and letter to the editor. The journal is abstracted and indexed in Index Medicus, Excerpt Medical, Medline and Clinical Abstracts.

3. OBJECTIVES

The objectives of the study are listed below:

1. To identify the authorship productivity;
2. To observe the year-wise productivity of the journal;
3. To identify the category of articles published;
4. To find out the distribution of authorship pattern in category- wise.

4. METHODOLOGY

Indian Journal of Chest Diseases and Allied Sciences (2000-2004) has been selected as the source journal. It deals with all aspects of fundamental research and applied research in medicine. The study has been taken from the journal for five years from 2000-2004 (Volume 42-46). All the required items like the number of authors; number of articles, number contributions and their type and authorship pattern in category-wise was collected and tabulated year-wise for analysis. For this study only the original, review and case reports are taken for tabulation.

5. DATA ANALYSIS

The data has been collected from the database of Indian Journal of Chest Diseases and Allied Science. It has been tabulated for the purpose of analysis such as frequency of author productivity, collaboration of authors, number of articles and their types, year-wise contribution of the journal.

Table1 Author Productivity

Sl. No.	No. of Authors	Productivity	%
1	1	10	5.23
2	2	36	18.84
3	3	34	17.80
4	4	46	24.08
5	5	34	17.80
6	6	21	11.00
7	7	5	2.61
8	8	1	0.52
9	9	2	1.06
10	10	2	1.06
Total		191	100

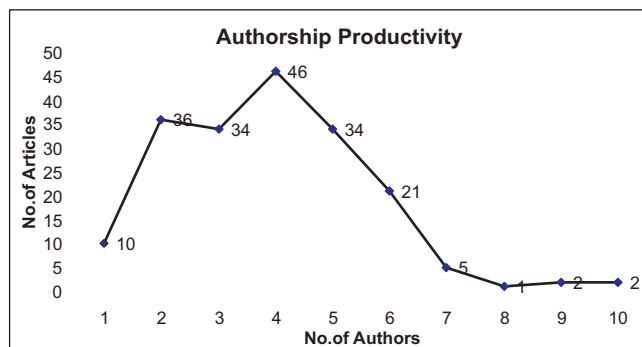


Fig.1 Author productivity

Due to the complex nature of the subject collaborative research becomes inevitable. Among the total 191 contributions only 5.23% of the papers are produced by single authorship category. 18.84% of the papers are produced by joint authorship collaboration. 24% of papers are produced by authorship collaboration which reaches the peak of all collaborative groups in the present study. As the number of collaborative authors grows above four the number of papers produced yields diminishing. The maximum numbers of contributed authors are 10 in number.

Table2 Year-wise Productivity

Sl. No.	Vol. No.	Year	Productivity	%
1	42	2000	37	19.37
2	43	2001	36	18.84
3	44	2002	42	22.00
4	45	2003	39	20.42
5	46	2004	37	19.37
Total			191	100

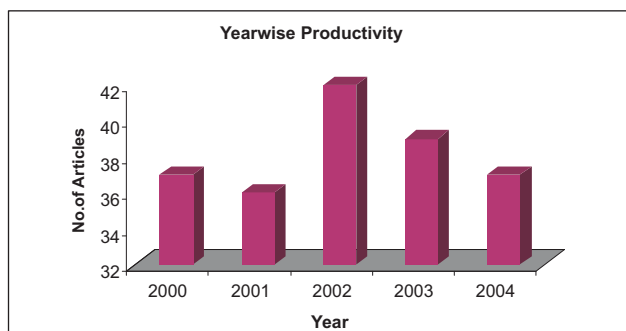


Fig.2 Year-wise productivity

As indicated in Table 2 the total number of contributions produced in 20 issues of 5 volumes of the journal is 191 of which 19.37% is contributed in 2000, 18.84% of them were published in 2001, 22% of them were published in 2002, 20.42% of them were published in 2003 and 19.37% of them were published in 2004. A notable attribute of the study is that the year 2002 shows the maximum of contributions.

There are three types of articles found in the journal such as original article, review article and case report. The types of article presented in Table 3.

The Table 3 indicates that the total number of contributions in 5 volumes from 2000 to 2004 were 191, of which 77 (40.32%), articles were published as original, of which 47 (24.60%) articles were published as review article and 67 (35.08%) articles were published as case reports

Table 3 Type of Articles Published

Sl. No.	Type of Article	No. of Articles	%
1	Original Article	77	40.32
2	Review Article	47	24.60
3	Case Report	67	35.08
Total		191	100

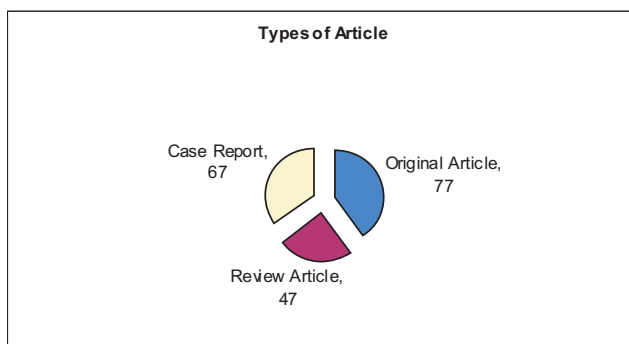


Fig.3 Types of articles

Table 4 Distribution of Authorship Pattern vs. Type of Article

No. of Authors	Original Article	Review Article	Case Report	Total
1	6	3	1	10
2	10	12	14	36
3	14	11	9	34
4	12	10	24	46
5	14	8	12	34
6	13	2	6	21
7	4	0	1	5
8	0	1	0	1
9	2	0	0	2
10	2	0	0	2
Total	77	47	67	191

The Table 4 shows that total number of contributions is 191 in different category type as original, review article and case studies. More in original articles have been contributed by three and five authors. Two joint authors contributed more review articles. Four authors contributed more articles in case reports.

6. FINDINGS OF THE STUDY

The following are the major findings of the study:

1. Four authors contributed more. The number of collaborative authors grow above 4 and the papers produced is less in number.
2. The maximum number of papers published in the year 2002 and the minimum in the year 2001.
3. Articles are published in different category (i.e) Original articles, Review Articles, and Case Reports.

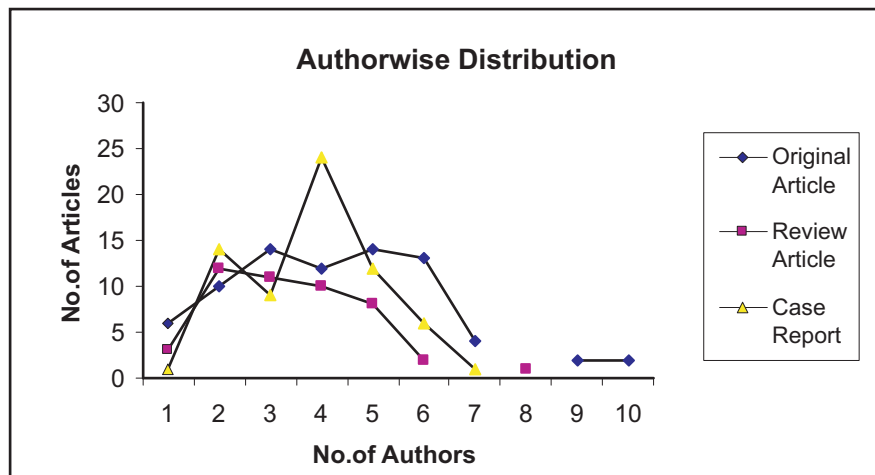


Fig.4 Distribution of Authorship Pattern vs. Type of Article

- Three and five authors contributed more in Original articles. Two joint authors contributed more review articles. Four authors contributed more articles in Case Reports.

7. CONCLUSION

This study was undertaken in order to describe the picture of research interest and formal communication pattern in the chest disease field by analyzing the Indian journal of Chest Diseases and Allied Sciences. As the number of collaborative authors grows above four, the number of papers produced yields less. The maximum numbers of contributed authors are 10 in number. A notable attribute of the study is that the year 2002 shows the maximum of contributions. Four authors contributed more articles in case reports. The study highlights that the single author contribution is less. Bibliometric analysis is considered as the tool for the measurement in the field of Library and Information Science and it has been increasingly used to evaluate the performance and growth of various disciplines of science.

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