The Indian Journal of Medical Research (2000 – 2005): A Bibliometric Analysis

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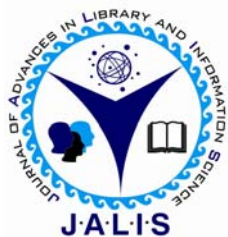
Abstract

The research publications in the field of Medical Research are increasing year by year. In this paper the authors have studied bibliometrics analysis of the Indian Journal of Medical Research [IJMR] for the period of five years between 2000 and 2005. The authors analyzed the year-wise publication of the journal, authorship pattern, source-wise publication, etc.

Keywords

Bibliometrics, Medical Research, Authorship pattern

Electronic access

The journal is available at www.jalis.in

Introduction

The last few decades, libraries have shown a considerable degree of momentum in the collection of building and leadership programme activities which involved considerable investments. In Library and Information Science, the Biobliometric study is one of the important thrust areas to do Research. Historically bibliometric methods have been used to trace relationships amongst academic journal citations and it is a set of methods used to study or measure texts and information. Many research fields use bibliometric methods to explore the impact of their field, the impact of a set of researchers or the impact of a particular paper.

Alan Pritchard (1969) has coined the word `bibliometrics'. It is the application of mathematical and statistical analysis to bibliographic units. When statistical methods were applied to analyze bibliographies, a new discipline in information science emerged known as "Bibliometrics". According to Sengupta (1985) Bibliometrics is the organization classification and quantitative evaluation of publication patterns of all macro and micro communication along with their authorships by mathematical and statistical calculus. The British standard Institution defines that the word Bibliometric is used to study of documents and patterns of publications in which mathematical and statistical methods have been applied.

Laws of Bibliometrics

The laws of Bibliometrics facilitate to achieve the said objective. These laws are empirically founded statistical distribution. There are three laws are used in Bibliometric study.

(a) Lokta's Law of productivity of authors contributing in a discipline or other fields.

(b) Bradford's Law of scattering of articles over different journals.

(c) Zipf's Law for frequency occurrence of words in a text (word count).

In this paper the authors have studied the research out in the Indian Journal of Medical Research during the period from 2000 to 2005.

About the Journal

The Indian Journal of Medical Research (IJMR) is a biomedical journal with international circulation. It publishes original communications of biomedical research that advances illuminates medical science or educates the journal readers. The Indian Journal of Medical Research is published a monthly by Indian Council of Medical Research, New Delhi.

Review of Literature

The Review of related literature is a significant and primary component in any research investigations. It enables to understand the earlier research interests, research pattern and the magnitude of research output in the field of knowledge. More number of research works has been carried out in Bibliometrics study.

William Gray Potter (1981) has viewed bibliometrics as the study and measurement of the publication pattern of all forms of written communication and their authors. Ravichandra Rao and Neelameghan (1992) have traced the development of the application of quantitative methods in library and information science. Lancaster (1992) has presented a bibliometric analysis of the citations to Ranganathan's writings over the period 1956-1990 using social sciences citations index and science citation index. Dhanya (2007) has studied mapping of literature on Diabetes Research in India. Sivaprasad *et al.* (2007) have studied a bibliometric analysis of the Indian journal of Agronomy and citations analysis of doctoral studies in Geology respectively. Sathiyamurthy *et al.* (2008) have studied citation analysis of Ph.D. theses in the Department of History, Annamalai University.

Objective:

- To find out years-wise publication of the journal.

- To analyze the authorship pattern.

- To study source-wise publication of the journal.

- To find out research publication among Education Institution and Research Center.

Methodology:

The primary data has been collected from the Indian Journal of Medical Research [IJMR] which is available at Annamalai University Medical Library. The secondary data were collected from the journal articles, books and other sources available in the Central Library and the websites. This study covers the year between 2000 and 2005 for analysis purpose.

Tools used

The collected data were tabulated in the MS-Office Excel sheet and used the simple statistics and percentage analysis are used. The extent of collaboration in research has been measured with the help of authorship pattern of papers. The following formula stipulated by Subramanyam (1983) is used for measuring collaboration.

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

Where C = extent of collaboration in a discipline

NM = No. of multiple authored papers in the discipline Published during the year and

NS = No. of single authored papers.

Results

The year-wise publication of the journal is given in Table – 1.

Year	No. of Issues
2000	12
2001	12
2002	12
2003	12
2004	12
2005	12
Total	60

From the above table, it is noted that the Indian Journal of Medical Research has published monthly. Totally 60 issues are published for five years between 2000 and 2005.

The authorship pattern of the research output in the IJMR is given in Table – 2.

Table-2: Authorship pattern between 2000 and 2005

Year	2000	2001	2002	2003	2004	2005	TOTAL	Percentage %
Single author	-	-	05	-	06	05	16	3.33
Double author	18	08	13	02	15	13	69	14.37
Three author	10	17	18	23	17	31	116	24.16
Four author	12	18	13	14	20	20	97	20.20
Five author	14	09	14	12	10	18	77	16.04
Multiple authors	22	21	10	14	13	25	105	21.87
Total	76	73	73	65	81	112	480	100%

The three authors publication is occupied first position (24.16%) followed by multiple authors (21.87%), four authors (20.20%).   Further the overall author contribution is higher during the year 2004 (112 authors) followed by the year 2004 (81 authors), 2000 (76 authors).

The Source-wise publication in the journal during the study period is given in Table – 3. The source of publication in the IJMR is categorized as Book Review, Journal Article, Case Study, Reports and Website.

Table-3 : Source-wise publication between 2000 and 2005

YEAR	2000	2001	2002	2003	2004	2005	Total	%
Journal Article	1386	1273	1925	1866	3382	4235	14067	93.49
Book Review	86	84	99	106	100	192	667	4.43
Case Study	8	9	15	9	20	29	90	0.59
Reports	12	13	8	19	17	45	114	0.75
Website	-	-	2	4	23	78	107	0.71
TOTAL	*1492*	*1379*	*2049*	*2004*	*3542*	4579	15045	100%

From the above table, it is clearly noted that the Journal articles are occupied first position (93.49%) followed by book review (4.43%), Reports (0.75%).   Further the year-wise publication of journal articles is also increasing between 2002 and 2005.

The publication output among the Educational Institution and Research Centre is given in Table – 4.

The pubilcation of Educational Institution is occupied first position (578 articles) compared to Reserch Centre (178 articles). Further the publication of articles by the educational institution is increasing gradually between 2000 and 2005.

Table-4: Publication among Educational Institution and Research Centre

Year	Educational Institution	(%)	Research Centre	(%)
2000	75	12.99	24	13.48
2001	52	8.99	20	11.23
2002	82	14.18	13	7.30
2003	82	14.18	26	14.60
2004	102	17.64	36	20.22
2005	185	32.00	59	33.14
TOTAL	578	100%	178	100%

Findings

- The year-wise publication of journal is published monthly and 60 issues are taken for the study.
- The three authors publication is occupied first position followed by multiple authors and four authors.
- The journal articles are occupied first position followed by Book Review and Case Study.
- The Educational Institution publication is more (578 articles) compared to Research Centre (178 articles).

Conclusion

The publication of research output in the field of Medical Research is increasing year by year. The medical practitioners are also interested to publish their research work through research articles, case study, reports, etc. in reputed journals. The Medical Research centres is also try to publish their research output through the reputed journals for the benefit of the users in their field.

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