

Original Article

Analysis of Contributions in Indian Journal of Experimental Biology

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INTRODUCTION

The study analyzes Indian Journal of Experimental Biology during 2000-2004 it is a monthly journal published by the Nation institute of science communication and information resources (NISCAIR) New Delhi.

This journal started in 1963 publishes full paper notes and reviews in cell biology, molecular biology, genetic engineering, endocrinology reproductive biology immunology developmental biology comparative physiology radiation biology chronobiology microbiology pharmacology toxicology and other biological fields including instrumentation and methodology.

There are many bibliometric studies conducted to know different aspects in science and social science as: Van Leeuwen, Thed (2006) Discussed an application of bibliometric techniques in the social sciences. Tomasello, T K (2001) conducted a bibliometric analysis of five leading named communication journal in light of recent calls regarding internet research. Nederhof, Anton J (2006) Addressed research performance monitoring of the social sciences and the humanities using citation analysis and main difference in publication and social sciences and humanities are outlined. Narang, Asha (2004) Conducted a bibliometric analysis of 8396 citations appended to 737 articles published in Indian journal of pure applied mathematics. Kannappanavar, B U Swamy, Chindananda & Kumar, M Vijay (2004) Publishing trends of Indian Chemical Scientists a bibliometric study. Verma, Neerja (2001) Analysis of contribution of ILA Herald. Kumar, S and Kuma, R S (2005) A bibliometric study of the journal of oilseeds research since 1993-2001. Bornmann, L Mutz R (2011) Further steps towards an ideal method of measuring citation performance: The avoidance of citation (ratio) averages in field-normalization, Journal of Informetrics.

Objectives of the study

- To study the year-wise distribution of papers;
- To examine authorship pattern distribution of contribution of the Journal;
- To study the institution-wise distribution of contribution of the journal;
- To study the geographical distribution of contribution of the journal;
- To Know the average length articles;
- To examine the average number of citations per article in the journal;
- To study the types of publication cited in the contributions of the journal;

METHODOLOGY

The data required for the study was collected from the print version of the journal for the period 2000-2004. The references appended to each paper carefully scanned and tabulated following section discuss the analysis of the data collected and figure headings as per the objective of the study.

Analysis and findings

Year-wise distribution

Year-wise distribution in five year there is published of total 1116 contribution has been which reviews notes and full paper articles.

Distribution of these 1116 contributions which were published during 2000-2004 has been given in detail in table 1. Maximum no. of articles published in 2000 and 2001 was 234 (20.97%), and minimum no. of contributions were 203(18.19%) in 2004.

Table 1-YEAR WISE DUSTRIBUTION OF ARTICLES

Year	Vol.	No. of issue	No. of contribution	% age
2000	38	1-12	234	20.97%
2001	39	1-12	234	20.97%
2002	40	1-12	225	20.17%
2003	41	1-12	220	19.71%
2004	42	1-12	203	18.19%
Total	5 Vol.	60 Issue	1116	100%

Table 2- Authorship pattern

No. of authors	Total No. of contribution	% age
One	79	7.08%
Two	341	30.56%
Three	344	30.82%
More than three	352	31.54%
Total	1116	100%

Authorship pattern of contributions

Authorship pattern detail has been given in table 2. Out of 1116 contributions, 79(7.08%) are by single author, 341(30.56%) by two authors, 344 (30.82%) by three authors and 352 (31.54%) by more than three authors.

Table 3- Volume wise authorship pattern of contribution

Vol. No.	One author	% age	Two authors	% age	Three authors	% age	More than three	% age
38	15	18.99%	71	20.83%	87	25.29%	61	17.33%
39	08	10.13%	72	21.11%	76	22.09%	78	22.16%
40	23	29.11%	65	19.06%	65	15.90%	72	20.45%
41	26	32.91%	68	19.84%	54	15.69%	72	20.45%
42	07	08.86%	65	19.06%	62	18.03%	69	19.60%
TOTAL	79	100%	341	100%	344	100%	352	99.99%

Authorship pattern of contribution (volume wise)

Volume wise authorship pattern of contribution has been given in table 4. It indicates that volume 41 has the highest number 26(32.91%) and volume 42 have the lowest no 7(08.86%) in 79 contributions made by single author. Volume 39 has the highest 72(21.11%) & volume 40 & 42 has lowest no 65(19.06%) in 341 contributions by two authors and out of the 344 contributions by three authors volume 38 has the highest 87(25.29%) and 41 has the lowest number 54(15.69%). In 352 contributions made by more than three authors, volumes 40 and 41 have 72 (20.45%) only.

Table 4- Institution wise distribution of contribution

Contributed by	No. of contribution	% age
Research Institute	228	20.43%
Academic	821	73.57%
Teaching faculty	30	02.69%
Miscellaneous	37	03.31%
Total	1116	100%

Institution wise distribution of contribution

Institution wise distribution detail has been given in table 4. Out 1116 contributions highest number 821(73.57%) has been contributed by academic and lowest number 30(02.69%) has been contributed by teaching faculty.

Table 5

Name of State	No. of contribution	% age
Uttar Pradesh	142	12.72%
Tamilnadu	132	11.83%
Foreign Countries	121	10.84%
New Delhi	108	09.68%
West Bengal	94	08.42%
Maharashtra	88	07.89%
Karnatka	82	07.35%
Punjab	64	05.73%
Kerala	48	04.30%
Gujrat	42	03.76%
Haryana	37	03.32%
Madhya Pradesh	28	02.51%
Andhra Pradesh	26	02.33%
Orissa	20	01.79%
Himachal Pradesh	18	01.61%
Arunachal Pradesh	18	01.61%
Rajasthan	18	01.61%
Jambu & Kashmir	7	0.63%
Bihar	4	0.36%
Meghalaya	3	0.27%
Goa	2	0.18%
Andman Nicover	2	0.18%
Sikkim	1	0.09%
Chhattisgarh	1	0.09%
Total	1116	100%

Distribution of authors by geographical location

Distribution of contribution in five volumes of journal is given in table 5 Out of 1116 the highest number 142(12.72%) has been contributed by authors from Uttar Pradesh and lowest 1(0.09%) from Sikkim and Chhattisgarh. Out of 1116, only 121(10.84%) contributions are from foreign countries.

Table 6-Length of articles

No of pages	2000	2001	2002	2003	2004	Total	% age
01-05	144	136	134	112	118	644	57.70%
06-10	87	91	72	82	75	407	36.47%
11-15	03	06	14	18	07	48	04.30%
16-20	-	-	04	06	02	12	01.08%
21-25	-	01	01	02	01	05	0.45%
Total	234	234	225	220	203	1116	100%

Length of article

Table 6- shows that 644(57.70%) articles has the length of the range of 01-05 pages, and at the same time it can be noted that 5 article has the length of more than 21-25 pages.

Table 7-Study of Citation

No of Citation	2000	2001	2002	2003	2004	Total	% age
01-30	174	171	147	141	138	771	69.09%
31-60	47	49	58	53	55	262	23.48%
61-90	7	8	8	13	4	40	03.58%
91-120	4	1	5	7	2	19	01.70%
121-150	2	3	4	3	2	14	01.25%
151-180	-	1	2	1	1	5	0.45%
181-210	-	-	-	2	-	2	0.18%

211-240	-	1	1	-	-	2	0.18%
241-270	-	-	-	-	-	-	-
271-300	-	-	-	-	-	-	-
301-330	-	-	-	-	-	-	-
331-360	-	-	-	-	1	1	0.09%
Total	234	234	225	220	203	1116	100%

Study of citation

Number of citations that appeared at the end of paper for years 2000-2004 is presented in table 7. It shows that all the 1116 papers published have citations. The minimum number 331-360 are depicted as 1(0.09%) and the maximum number of citations with 01-30 per article are depicted as 771(69.09%).

Table 8-DISTRIBUTION OF Citations

Year	Vol.	No. of issue	No. of Citations	% age
2000	38	1-12	6331	18.86%
2001	39	1-12	6534	19.46%
2002	40	1-12	7143	21.28%
2003	41	1-12	7475	22.26%
2004	42	1-12	6091	18.14%
Total	5 Vol.	60 Issues	33574	100%

Year-wise and volume-wise appearance of citations

During the period under study of five years (2000-2004), in all 33574 citations are found to be appended to 1116 articles (Table 8). In the year 2003, volume 41 has the highest number 7475(22.26%) and year 2004, volume 42 has the lowest number 6091(18.14%).

Table 9- Types of resources used by the authors

Types of publications	No. of citations	% age	Cumulative	% age
Journals	13933	41.50%	13933	41.50%
Books	10072	30%	24005	71.49%
Online Search/Websites	3861	11.51%	27866	82.99%
Seminar/Workshop/conferences	2014	5.99%	29880	88.99%
Reference Sources	1679	4.99%	31559	93.99%
Dissertation/thesis	1344	4.01%	32903	98.00%
Miscellaneous	671	2%	33574	100%
Total	33574	100%		

Types of resources

Table 9 shows that out of 33574 citations 13933 (41.50%) are journal citation and 10072(30%) are books citations.

CONCLUSION

The following conclusions are drawn from the present study.

- The maximum number of papers 234(20.97%) were published in 2000 and 2001, and minimum number 203(18.19%) in 2004.
- Articles in maximum number 352(31.54%) have been contributed by more than three authors 344(30.82%) articles by three authors ,341(30.56%) articles by two authors and 79(7.08%) articles by one authors.
- Authors in 142 (12.72%) contributions were from Uttar Pradesh and authors in 121 (10.84%) from foreign countries. Is it was found in volumes of Indian journals it reflected that the journal needs the popularity in other countries also.
- In a total of 644 papers, the average length ranged between 01-05 pages.
- Most of the papers, 771(69.09%) have 01-30 citation. This is a healthy trend. And 1(0.09%) paper was 331-360 citation.

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