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Research In Library Herald During 2017-2021 : A Bibliometric Analysis

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ABSTRACT:
Bibliometric analysis of research papers, articles, etc., has gained increasing importance in Library and Information Science to analyze the publication patterns, authorship patterns, and citation patterns of research papers published within a defined period. Bibliometric analysis is essential for library professionals in the collection development process. This paper intends to analyze the articles published in the journal 'Library Herald' from 2017 to 2021 with the help of different statistical tools and techniques. The results indicate most of the contributions by two authors and one article by six authors and the overall degree of collaboration among authors is 0.62. The study highlights the volume-wise distribution of articles, authorship pattern, Degree of collaboration, keyword use pattern, length of articles, and geographical distribution of authors.

KEYWORDS: *Bibliometric, Library Herald, Degree of collaboration, Authorship pattern*

INTRODUCTION:

Bibliometric analysis of research papers, articles, etc., has gained increasing importance in Library and Information Science to analyze the publication patterns, authorship patterns, and citation patterns of research papers published within a defined period. Bibliometric analysis is an essential tool for library professionals in the collection development process. The subscription cost of journals is increasing day by day, and libraries are facing the problem of fund crunch to subscribe to those journals. At this juncture, bibliometric analysis plays a pivotal role in carefully selecting journals based on qualitative analysis of various aspects of journals. Bibliometrics consists of two words 'biblio' and 'metrics'. 'Bibliometrics' is derived from the Greek word 'billion', which means book, and 'metrics' is derived from the Latin or Greek word 'matrices' or 'metrics', respectively, each meaning measurement. The term Bibliometrics was first suggested by Alan Pritchard in 1969 in his paper "Statistical Bibliography or Bibliometrics?". He defined Bibliometrics as "the application of mathematics and statistical methods to books and other media of communication" (Pritchard, 1969). The Online Dictionary of Library and Information Science (ODLIS) defines Bibliometrics as "The use of mathematical and statistical methods to study and identify patterns in the usage of materials and services within a library or to analyze the historical development of a specific body of literature, especially its authorship, publication, and use" (ODLIS, 2022). Thus, Bibliometrics uses different statistical methods to analyze the contents of books, journal articles, and other publications.

LIBRARY HERALD:

Library Herald is one of the famous journals in the field of Library science in India, published by the Delhi Library Association and began its publication in 1958. An article on Document, Documentation and Standardization by Dr. S.R. Ranganathan was published in the first issue of this journal. Library Herald is a double-blind Peer reviewed scholarly research journal published quarterly in March, June, September, and December every year.

LITERATURE REVIEW:

(Lijina, 2018) has analyzed six volumes of the International Journal of Library and Information Science during 2012-2017. A total of 161 articles were studied to get information regarding the number of authors, page length, references, etc. Moreover, he found the authorship pattern as 77 articles (47.83%) have two authors, 45 articles (27.95%) are single-authored, and the average Degree of collaboration is 0.72. most of the articles in IJLIS are from India (85.19%); thereafter, Nigeria (10.49%) is in second position, and in case of state-wise contribution Tamil Nadu (73.91%) stands first and Kerala (11.18%) in second position.

 (Kumar, 2021) systematically reviewed articles of IASLIC Bulletin published from the year 2016-2020 and found most of the articles (27.78%) are written by two authors, followed by more than three authors (25.00%), single-author papers (23.14%) and three author papers (22.23%) and also found that from West Bengal is the most contributing state in India during the period and Maximum number of articles found in the area 'Information Technology' i.e. 14 articles (12.96%), followed by 'Library Automation' constituted 12 articles (11.11%).

(Roy & Basak, 2013) in their paper Journal of Documentation: A Bibliometric Study, 36 issues of the journal for six years (2005- 2010) were taken for the analysis of authorship pattern, volume-wise contributions, Degree of collaboration, etc., and they found that the multiple authorship pattern has the most productive publications, i.e., 124 (50.5%) papers while the single authorship pattern has 122 (49.5%) papers, the Degree of collaboration is highest in volume 63 (2007) and lowest in volume 61 (2005). The Degree of collaboration in the journal "Journal of Documentation" was found to be 0.51.

(Kannan & Thanuskkodi, 2019) Carried an analysis of Library Philosophy and Practice journal for 20 years and found that Nigeria contributed the highest 550 articles and India secured the second position, contributing 310 articles. They also noted that Bhatti, R. from Pakistan is the most prolific author with 19 publications, and the University of Ibadan is the most contributing institution, contributing 78 articles. Out of 1402 articles, 811 (57.84) articles are joint authorship, and 591 (42.16) articles are single authorship, and the average Degree of collaboration is 0.578 during the period.

OBJECTIVES OF THE STUDY:

The study's objective is to analyze the articles published in the journal 'Library Herald' during a specific period with the help of different statistical tools and techniques. The main objectives of the study are as follows:

To analyze all the articles published during 2017-2021 in the journal Library Herald;

To determine the authorship patterns of the articles volume and issue-wise;

To represent the geographical distribution of the authors;

To determine the most prolific author; and

To calculate the degree of collaboration among authors

SCOPE:

This study's scope is limited to analyzing the publication patterns of a prestigious journal in the library and information science field. This study has considered the journal Library Herald for analyzing the various aspects of publication. The scope is limited to five years (2017-2021) of publications of articles in this journal. This study does not consider various book reviews and special publications published in this period. This study considered only the articles published during the period.

METHODOLOGY:

This study will only be possible once the data is collected. To collect data, either a print version of the journal or online access to the journal in hand is necessary. Articles published between 2017 and 2021 have been downloaded from the online version of the journal Library Herald (https://www.indianjournals.com/ijor.aspx?target=ijor:lh&type=home), which is accessible under the N-LIST (National Library and Information Services Infrastructure for Scholarly Content) program in our institution. After that, data was collected from the downloaded articles in an MS-Excel file for analysis.

DATA ANALYSIS AND INTERPRETATION:

Volume-wise Distribution of Articles:

Table-1 represents the distribution of articles published in each issue from 2017 to 2021 in the journal Library Herald. From Table- 1, it is clear that in the year 2020, two issues, issue 2 and issue 3, merged into a single issue, and in that year, the total number of articles published was 22, which is the lowest, while in the year 2021, the total number of articles published was 45 which is highest among all the years taken into account. The percentage of articles published year-wise is depicted in the pie chart (Figure-1).

Year	Volume	Library Herald				Total no. of Articles	%
		Number of Articles					
		Issue 1	Issue 2	Issue 3	Issue 4		
2017	55	8	7	6	9	30	17.86
2018	56	15	5	7	10	37	22.02
2019	57	8	7	12	7	34	20.24
2020	58	4	10		8	22	13.09
2021	59	6	9	20	10	45	26.79
Total	**5**					**168**	**100**

Table 1: Issue-wise distribution of articles in Library Herald
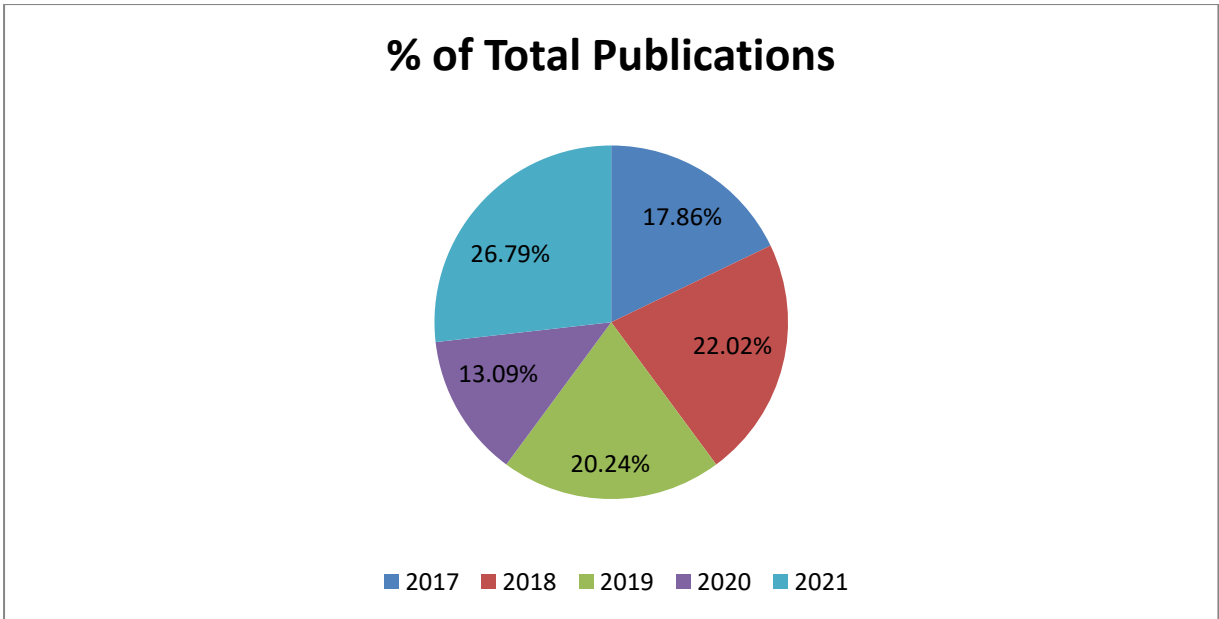
% of Total Publications

Figure-1: Year wise percentage of articles

Authorship Pattern of Articles:

Table-2 describes the authorship pattern of articles, and it is found that the total number of authors contributed during the study period is 309, and the total number of articles published is 168. Out of 168 articles, 64 (38.09%) articles are single-authored, 82 (48.81%) articles are written by two authors, 12 (7.14%) articles are written by three authors, 6 (3.57%) articles are written by four authors, 3 (1.79%) articles are written by five authors and 1 (0.60%) article is written by six authors. Therefore, the article written by double author is the highest. Figure-2 depicts the distribution authorship pattern.

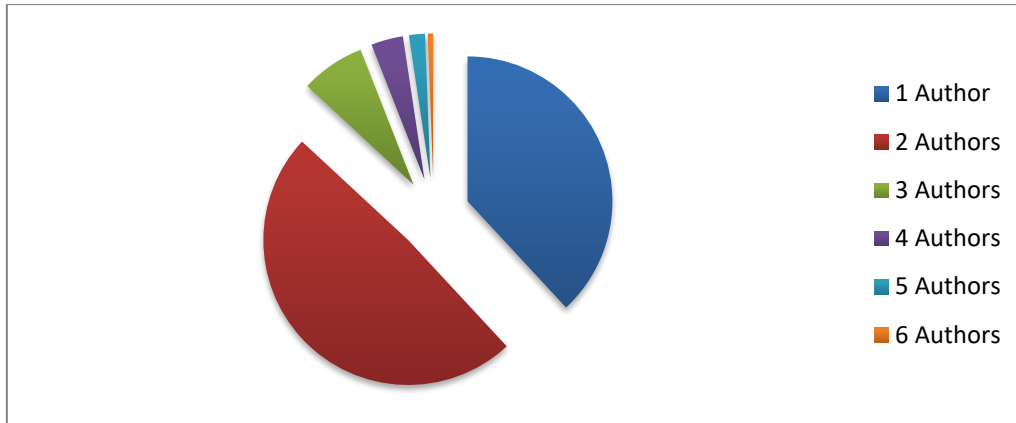| Number of Authors	Number of Articles	% of Articles	Total no. of Authors
1 Author	64	38.09	64
2 Authors	82	48.81	164
3 Authors	12	7.14	36
4 Authors	6	3.57	24
5 Authors	3	1.79	15
6 Authors	1	0.60	6
Total	**168**	*100*	*309*

Table 2: Authorship Pattern

Figure-2: Authorship Pattern

Degree of Collaboration:

Table-3 shows the Degree of collaboration of articles published in Library Herald during 2017-2021. It also shows the trends in authorship patterns of single and joint authorship in the publications.

In this study, the formula suggested by Subramanyam in 1983 is used to calculate the Degree of collaboration. The formula is expressed as

$$DC = \frac{Nm}{(Nm + Ns)}$$

Where DC = Degree of collaboration, Nm = Number of Multiple authored publications, and Ns = Number of Single authored publications.

From the formula mentioned above, we can find that the overall Degree of collaboration is 0.62, i.e., 64 articles are single authorship, and 104 articles are written with collaborative authorship. Table-3 also reveals that the value of Degree of collaboration is 0.78 in 2021 and 0.37 in 2017.

Figure-3 shows that the Degree of collaboration increased from 2017 (0.37) to 2018 (0.65) and 2019 (0.68); thereafter the degree of collaboration decreased to 0.5, and again, in 2021, it increased to 0.78, which is the maximum during the study period.

Sl. No.	Year	Single Authored Publication (Ns)	Multiple Authored Publication (Nm)	Nm+Ns	Degree of Collaboraation DC=Nm/(Nm+Ns)
1	2017	19	11	30	0.37
2	2018	13	24	37	0.65
3	2019	11	23	34	0.68
4	2020	11	11	22	0.5
5	2021	10	35	45	0.78
		64	**104**	**168**	**0.62**

Table-3: Degree of Collaboration

0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0

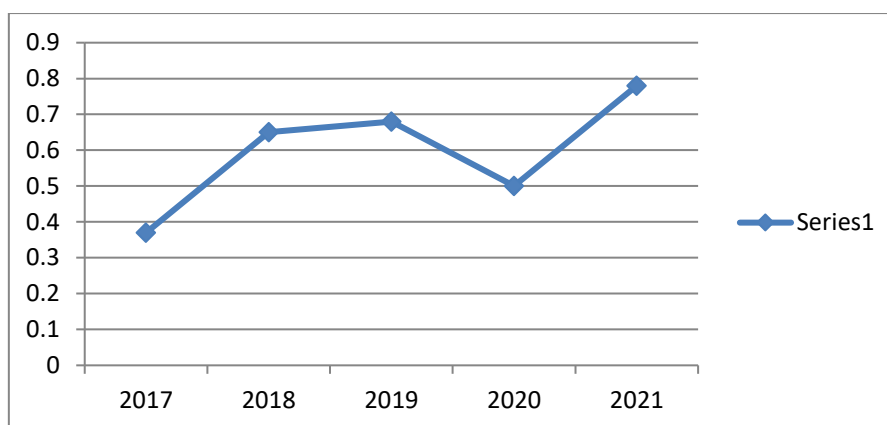2017   2018   2019   2020   2021

◆ Series1

Figure-3: Trends in Degree of Collaboration

Most Prolific Author:

Table 6 shows the year-wise contributions of each author in the journal Library Herald during the study period (2017-2021). Here, the authors who have contributed three or more articles during the study period are listed separately, and the authors who have contributed two articles during the study period in a single entry and those who have contributed only one article during the study period in another single entry. From the table, we can find that the author K. P. Singh is the most prolific author, who has contributed nine articles, followed by K. C. Garg and B.M. Gupta, who have contributed the second maximum number of articles, each of them contributed five articles, and the third position secured by three authors Shailendra Kumar, Rajesh Singh, and Nosrat Riahinia, each of them contributed four articles during the study period.

Author	*Year 2017*	*Year 2018*	*Year 2019*	*Year 2020*	*Year 2021*	*Grand Total*
Singh, K. P.	2	2	3	1	1	9
Garg, K.C.	1	1	1	1	1	5
Gupta, B.M.					5	5
Kumar, Shailendra		1	3			4
Singh, Rajesh	1	2	1			4
Riahinia, Nosrat		2	2			4
Manu, T R		2		1		3
Gujral, Garima			1		2	3
Salimi, Zahra		1	2			3
Dwivedi, Sandhya	1	1	1			3
Shivarama, J		2	1			3
Jalal, Samir Kumar	1		1	1		3
Verma, Manoj Kumar		1		1	1	3
Kumar, Manish		1			2	3
Zeinali, Vahide		2	1			3
18 Authors with two articles	9	5	3	4	15	36
215 Authors with one article	27	50	43	26	69	215

Table-6: Major contributors

Number of Keywords Listed in Articles:

The range of keywords used in articles during the study period in Library Herald can be found in Table-4. We can found that 4 to 6 keywords are listed in the maximum number of articles, whereas 12 articles were published without any keywords.

Range of Keywords	Number of Articles	Percentage
Nil	12	7.14
1-3	12	7.14
4-6	109	64.88
7-9	29	17.26
10-12	6	3.57
Total	**168**	**100 (99.99)**

Table-4: Keywords used in articles

Length of Articles:

Table-5 represents the length of articles published in the Library Herald journal during 2017-2021. Out of 168 articles, 73 (43.45%) articles have a length of 10-14 pages. Therefore, the maximum number of articles published in the Library Herald during the study period is 10-14 pages long. Table 4 also shows that the mean page length is 14.34, which means that the average page length of 168 articles is 14.34 pages.

Sl. No.	Page Range	Year					Total	%	Average
		2017	2018	2019	2020	2021			
1	Up to 4	0	0	0	0	0	0	0	
2	5-9	1	11	4	5	3	24	14.29	
3	10-14	14	17	18	5	19	73	43.45	
4	15-19	9	7	8	6	17	47	27.98	**14.34**
5	20-24	5	2	3	6	4	20	11.9	
6	25-29	1	0	1	0	2	4	2.38	
	Total	**30**	**37**	**34**	**22**	**45**	**168**	**100**	

Table5: Length of articles

State-wise contributor of articles from India:

State-wise distribution of contributors from India has been tabulated in Table-7. Of 309 authors, 281 are from India, and 28 are from the country other than India. During the study period, out of 281 Indian contributors, a maximum number of contributors (95) were from New Delhi, followed by 23 from Maharashtra and 21 from West Bengal.

Sl. No.	State or Union Territory of India / Other Country	No. of Authors
1	Andhra Pradesh	3
2	Assam	7
3	Bihar	3
4	Delhi	95
5	Gujarat	12
6	Haryana	6
7	Himachal Pradesh	2
8	Jammu and Kashmir	6

9	Karnataka	19
10	Kerala	13
11	Madhya Pradesh	4
12	Maharashtra	23
13	Manipur	2
14	Meghalaya	4
15	Mizoram	6
16	Odisha	3
17	Puducherry	3
18	Punjab	14
19	Rajasthan	5
20	Tamil Nadu	6
21	Telangana	4
22	Tripura	1
23	Uttar Pradesh	18
24	Uttarakhand	1
25	West Bengal	21
	Outside India	28
Total		**309**

Table-7: State-wise contributions

CONCLUTION:

The journal Library Herald of Delhi Library Association has published 168 articles and a few special articles and book reviews from 2017-2021. In the year 2021, the maximum number of publications of articles recorded 45, constituting (26.79%), the second maximum number of publications recorded 37, constituting (22.02%) in the year 2018, and the least number of publications of articles recorded 22, constituting (13.09%) articles in the year 2020 during the study period. Most of the published articles, 104, are written in collaborative authorship, and the overall degree of collaboration is 0.62. From the collected data, it may be seen that not only the Indian authors but also those from the country other than India have contributed to this journal. Out of 309 authors, 28 contributed to this journal are from countries other than India. It may also be stated that as the journal Library Herald is published in India, most contributions are from the Indian authors.

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