

Research Productivity and Degree of Collaboration in Journal of Indian Library Association during 2015-2022

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ABSTRACT

The study presented is 'Research Productivity and Degree of Collaboration in Journal of Indian Library Association during 2015-2022'. The study includes the year-wise distribution, references, Country-wise contributions, Authorship Patterns, Page length, Author's Contributions, and Degree of Collaboration of articles. A study found that the contribution of articles to the Journal of Indian Library Association is not only from India but also an inscription from abroad. At the time of the study, 262 research papers have been published from these 8 volumes, out of which 82 (31.29%) are single authors and 180 (68.70%) are multi-authors. Thus it is seen that the number of multi authors is more than that of single authors.

KEYWORDS: Research Productivity, Indian Library Association, authorship patterns, degree of collaboration, cited documents, library and information science.

INTRODUCTION

Journal of Indian Library Association is an international peer-reviewed journal in the field of Library and Information Science. It is published by Indian Library Association as a quarterly. This journal publishes articles related to the digital library as well as information retrieval, data management, statistical technique, information system, e-book, e-journal, machine learning, virtual information, and management information systems, etc.

SCOPE OF THE STUDY

The present study is 'Journal of Indian Library Association' published Original articles in the fields of Library and Information Science. The limitation of the study covers 8 volumes during the published the year 2015-22.

METHODOLOGY OF THE STUDY

This bibliometrics study is the application of Statistical and Mathematical Methods. A total of 7 Volumes were selected for the study. The study also based on Statistical and Mathematical analysis with various aspects of articles

such as the volume, country-wise distribution, year-wise references, authorship patterns, articles page length, single and multi authors of contributions, and Degree of Collaboration in various tables and figures. Also, data have been calculated and represented in Table and Figures.

REVIEW OF RELATED OF LITERATURE

In the past, there have been many bibliometrics studies of many journals in the Library and Information Science.

“**Singh and Kumar (2021)**¹ studies highlight the bibliometric investigation of 542 articles published in DESIDOC Journal of Library and Information Technology (DJLIT) during the period 2010-2019. The study analyses the various bibliometric parameters such as, chronological distribution of articles and references, geographical distribution, distribution of Intellectual output, and pagination pattern. According to the study the maximum number *i.e.* 258 (47.60%) articles are double authored, followed by single author 172 (31.73%) articles.”

“**Peidu and Thangal (2018)**² study highlight the journal examines bibliometric parameters, such as research output, authorship, collaborative measures, networking, authors’ and institutions’ productivity, a contribution from foreign countries, and geographical distribution. The study found that the research output in 10 years has decreased by 0.95 percent. However, on an annual account, some years registered positive growth. Single authorship (52 papers) was seen as more prevalent in the authorship pattern. Among joint-author papers, two-author (29 papers) and three-author (24 papers) papers are more common. Overall, collaborative measures for the decade, namely, degree of collaboration, collaborative index, and collaboration coefficient was found to be 0.53, 1.89, and 0.31, respectively.”

“**Sonkar and other (2017)**³ revealed in their study founded that each year the journal has distinguished of papers except the year 2010, In the context of authorship pattern the result shows that two-authored papers are in highest with 37% (77 papers) in the whole period (2005-2014), Average rate of a degree of collaboration is 2.8, The journal information technology and people are enriched with the scholarly contribution of 25.6% countries across the world among these 25.6% countries like USA, UK, Australia, Finland, Canada, etc, The result shows that documentary materials are cited in maximum number (3881, [31%]) than non-documentary materials (8437[68%]) during the period of 2006 to 2015.”

“**Zafrunnisha (2015)**⁴ study find out a research contribution of the journal “Prabandhan: Indian Journal of Management”. The investigations of such kind of studies are found to be useful to manage the information resources and services in libraries and information centers. The distribution of citations according to bibliographic form, subject, country, and language and rank list of cited journals are presented and discussed.”

“**Kumar, Dora, and Desai (2015)**⁵ study was extracted from SCOPUS and included a total of 760 publications that were attributed to authors affiliated to Gujarat University. The publication data were analyzed concerning the type of publications where 83% are journal articles. The collaboration was found to be the highest in the year 2012 at 0.70 based on the modified collaboration coefficient.”

“**Hussian and Fatima (2011)**⁶ study of demonstrates and elaborates on the various aspects of the IFLA Journal, such as its distribution of articles by year, authorship patterns, distribution of contributions by institutions, subject distributions, citation patterns, length of the article, a rank of cited authors, and geographical distribution of authors.”

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“Dixit and Katare’s (2007)⁷ studies highlight the research trend of cotton scientists by studying the patterns of articles published in the journal of the Indian society of cotton improvement for the period 1995-2004. Patterns related to authorship, bibliographic forms, contributing institutions, in the field of cotton science have also been done.”

OBJECTIVES OF STUDY

The main objective of this present study are

- ✓ To analyze articles published in ‘Journal of Indian Library Association during 2015-2022’.
- ✓ Know about the volume-wise Distribution, page length average, year-wise references.
- ✓ Understand the country-wise research contributions and study of the Degree of Collaboration.

DATA ANALYSIS AND INTERPRETATION

Table 1: Distribution of articles in year-wise

S. No.	Year	Vol. and Issues		Articles	%	Cumulative %
1	2015	51	1-4	19	7.25	7.25
2	2016	52	1-4	17	6.48	13.73
3	2017	53	1-4	20	7.63	21.36
4	2018	54	1-4	23	8.77	30.13
5	2019	55	1-4	28	10.68	40.81
6	2020	56	1-4	41	15.64	56.45
7	2021	57	1-4	61	23.28	79.73
8	2022	58	1-4	53	20.22	99.95
Total				262	100	

Tables 1 indicate the distribution of articles from 2015 to 2022. **The maximum 61 (23.28%) articles Published in the year 2021**, a minimum of 17 (6.48%) articles Published in the year 2016. So the percentages range varies from 6.48% to 23.28%.

Table 2: Year wise references

Year	Vol. and Issues		References	Cumulative References	%	Cumulative %
2015	51	1-4	257	257	6.35	6.35
2016	52	1-4	204	461	5.04	11.39
2017	53	1-4	306	767	7.57	18.96
2018	54	1-4	311	1078	7.69	26.65
2019	55	1-4	384	1462	9.50	36.15
2020	56	1-4	636	2098	15.73	51.88
2021	57	1-4	1083	3181	26.80	78.68
2022	58	1-4	860	4041	21.28	99.96
Total			4041		100	

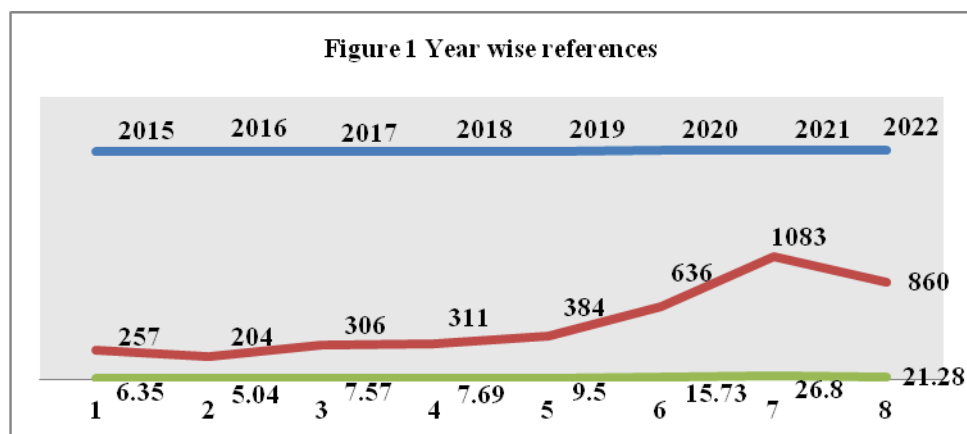


Table 2 and figure 1 Shows the **maximum number of references 1083 (26.80%)** produced in 2021, followed by 860 (21.28%) in 2022, 636 (15.73%) in 2020, 384 (9.50%) in 2019, 311 (7.69%) in 2018, 306 (7.57%) in 2017, 257 (6.35%) in 2015, and **204 (5.04%)** references in 2016.

Table 3: Country-wise contributions

S. No.	Name of countries	Number of research contributions	%	Order of Rank
1	India	259	98.85	1
2	Iran	1	0.38	2
3	Nigeria	1	0.38	2
4	Saudi Arabia	1	0.38	2
Total		262	100	1-2

Table 3 shows the country-wise contributions in volume 51-58 of the source journal. The **maximum 259 (98.85%)** order of rank 1 has been contributed by **Indian authors**, followed by Iran, Nigeria and Saudi Arabia with minimum 1 (0.38%) order of rank 2 research contributions.

Table - 4: Display of Page length of the contributions

Page length	Year								Total	%
	2015	2016	2017	2018	2019	2020	2021	2022		
01-05	1	3	4	4	1	-	-	-	13	4.96
06-10	17	11	9	13	21	14	13	9	107	40.83
11-15	1	3	7	4	6	26	44	33	124	47.32
16-20	-	-	-	2	-	1	4	11	18	6.87
Total	19	17	20	23	28	41	61	53	262	100

Table 4 shows the page length of the articles. Out of a total of 262 research contributions, 13 (4.96%) articles have page length of 01-05, 107 (40.83%) articles have page length of 06-10 pages, 124 (47.32%) articles have page length of 11-15 pages, and 18 (6.87%) articles have page length of 16-20 pages. So that the **highest page length** of articles **124 (2015-2022)** comes in **11-15 pages** and the **lowest page length** of articles **13 (2015-2022)** appeared in **01-05 pages**.

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Table 5: Authorship Patterns of articles

No. of Author	Year								Total	%
	2015	2016	2017	2018	2019	2020	2021	2022		
One	12	8	6	11	11	6	14	14	82	31.29
Two	7	9	13	11	14	23	31	31	139	53.05
Three	-	-	1	1	1	7	15	7	32	12.21
Four	-	-	-	-	2	5	-	1	8	3.05
Five	-	-	-	-	-	-	1	-	1	0.38
Total	19	17	20	23	28	41	61	53	262	100

Figure 2 Authorship Patterns of Contributions

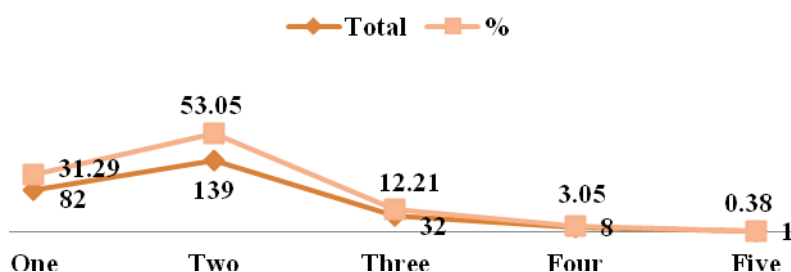


Table 5 and figure 2 shows the authorship patterns of 'Journal of Indian Library Association', among the 262 research articles contributed, 82 (31.29%) are single authors, 139 (53.05%) are two authors, 32 (12.21%) are three authors, 08 (3.05%) are four authors, 1 (0.38%) are five authors. **Finally**, from the above analysis, the maximum numbers of research contributors are **180(68.70%) of multi authors** in the articles.

Table 6: Single and Multi Authors of Contributions

Vol.	Year	Single Author (Ns)		Multi Author (Nm)		Total
		No. of Articles	%	No. of Articles	%	
1	2015	12	14.63	7	3.88	19
2	2016	8	9.75	9	5.00	17
3	2017	6	7.31	14	7.77	20
4	2018	11	13.41	12	6.66	23
5	2019	11	13.41	17	9.44	28
6	2020	6	7.31	35	19.44	41
7	2021	14	17.03	47	26.11	61
8	2022	14	17.03	39	21.66	53
Total		82 (Ns)	31.29%	180 (Nm)	68.70%	262

Table 6 indicates the author's Contributions. The contributions in the single author's articles are 82 (31.29%) and 180 (68.70%) are multiple authors articles, and the highest research papers are multiple authors articles.

Table 7: Degree of Collaboration

S. No.	Year	Degree of Collaboration
1	2015	0.36
2	2016	0.52
3	2017	0.7
4	2018	0.52
5	2019	0.60
6	2020	0.85
7	2021	0.77
8	2022	0.73

Degree of Collaboration among authors in 'Journal of Indian Library Association' is presented in Table 7.

Calculate in order to the degree of collaboration (DC) among the authors in Journal of Indian Library Association, the formula given by "K. Subramanyam (1983) is used; the formula is as follows –

DC = Degree of Collaboration

Nm = Number of multi-authored Contributions

Ns = Number of single-authored Contributions

The value of **DC** = $(Nm)/(Nm+Ns)$.

In the present study, here – **Nm = 180; Ns = 82**

$$180/262 = 0.6870$$

Shows the **degree of collaboration is 180 (0.6870%)** in terms of collective or multi-authored Collaboration during the study period.

CONCLUSION

In this study found this journal published 262 articles from 2015-2022. The maximum 61 (23.28%) articles Published in the year 2021, a minimum of 17 (6.48%) articles Published in the year 2016, the maximum number of references 1083 (26.80%) produced in 2021, the maximum 259 (98.85%) order of rank 1 has been contributed by Indian authors, followed by Iran, Nigeria and Saudi Arabia with minimum 1 (0.38%) order of rank 2 research contributions. the highest page length of articles 124(47.32%) comes in 11-15 pages and the lowest page length of articles 13(4.96%) appeared in 01-05 pages, the contributions in the single author's articles are 82 (31.29%) and 180 (68.70%) are multiple authors articles, and the highest research papers are multiple authors articles, the **degree of collaboration is 180 (0.6870%)** in terms of collective or multi-authored Collaboration during the study period.

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