

Research Journal of Pharmacy and Technology: A Bibliometric Study (2016 to 2020)

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Abstract

Bibliometrics is an important quantitative method in Library and Information Science for analyzing scholarly communication. The present study examines the publication trends of the Research Journal of Pharmacy and Technology (RJPT) over a five-year period from 2016 to 2020 using bibliometric techniques. A total of 4,518 articles published across five volumes were analyzed. The study focuses on year-wise and issue-wise distribution, authorship pattern, degree of collaboration, and article length. Results indicate a steady growth in publication output, with the highest number of articles published in 2020. Multi-authored papers predominate, highlighting strong collaborative research practices. The degree of collaboration is notably high, reflecting teamwork in pharmaceutical research. Short-length articles form the majority of publications. Variations in average article length were observed across the study period. Overall, the findings demonstrate the usefulness of bibliometric analysis in assessing journal growth and research trends.

Keywords: Bibliometrics, authorship pattern, citation analysis. Degree of collaboration,

1. Introduction

The word "bibliometrics" constitutes one of the major thrust areas of research in the field of library and information science. It utilizes quantitative analysis and statistics to describe patterns of publications within a given field or body of literature. The term statistical bibliography was first employed by E.W. Hulme in 1923, to refer to the application of quantitative techniques to libraries. The word bibliometrics appeared in print in 1969 in Alan Pitchard's article statistical bibliography or bibliometrics in the December issue of the Journal of Documentation. It flourished in early 20th century with the works of Lotka, Bradford and Zipf who observed distribution pattern in word frequency, author and journal productivity. Bibliometric methods have been used in Eastern Europe countries to monitor science and scientists. The field of bibliometrics has produced major Information scientists such as B.C. Brookers and H. Egghe. The present study has been undertaken in order to know the nature and contents of articles in "Research Journal of Pharmacy and Technology".

1.1 About Research Journal of Pharmacy and Technology

The Research Journal of Pharmacy and Technology (RJPT) is a well-established, peer-reviewed journal in the fields of pharmaceutical sciences and technology. Founded in 2008 and published by A & V Publication, the journal is published on a monthly basis, ensuring the timely dissemination of research findings. The scope of RJPT is broad, encompassing contemporary topics related to pharmaceutical sciences, technology, and medicine. The journal publishes original research articles, comprehensive

review papers, and short communications, thereby supporting diverse forms of scholarly contribution. Its wide visibility and academic credibility are enhanced through indexing in prominent national and international databases such as Scopus, ProQuest Central, CAB Abstracts, CAS (Chemical Abstracts Service), Indian Science Abstracts, Google Scholar, and Gale Group (USA).

1.2 Related Studies

Previous bibliometric and scientometric studies reveal consistent growth and evolving publication patterns across diverse scholarly journals. Studies by Vijay and Raghavan (2007) and Hussain et al. (2011) highlight steady increases in publication output, with strong national contributions and a dominance of joint authorship. Several analyses, including those by Mulla (2011) and Santhi (2011), emphasize a preference for two-authored papers and detailed examinations of citation and authorship characteristics. Indian journals such as Current Science, Indian Journal of Cancer, and Indian Journal of Medical Research have been profiled to understand national research trends and subject focus. Later studies by Raju (2017), Peidu and Maningdoula (2018), and Arumugam (2020) demonstrate the application of bibliometric methods to emerging electronic and international journals. Recent analyses by Panda (2021) and Parida et al. (2022) further show the usefulness of scientometric indicators in assessing research impact, thematic evolution, and global visibility of journals. Overall, these studies confirm bibliometrics as an effective tool for evaluating journal growth, authorship patterns, and scholarly influence.

2.Objectives

The present study has been undertaken with the objective of analyzing the following aspects:

1. To study the number of contributions published during the period of study
2. To find out the year wise distribution of articles
3. To study the authorship pattern
4. To classify articles according to the length
5. To study Geographical Distribution of Articles

3. Methodology

Methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic features of the articles and citation analysis of reference appended at the end of each article, published in "Research Journal of Pharmacy and Technology" from 2016 to 2020. The data pertaining to "Research Journal of Pharmacy and Technology" regarding 4518 articles made from volume 09 in 2016 to volume 13 in 2020. All the bibliographic details were noted and a computerized database is then created for in-depth analysis

4. Analysis

All the details such as authors, title, year of publication, pagination, institutional affiliation etc of all articles published from 2016 to 2020 were recorded for the following analysis.

Table 1: Year wise Distribution of Articles

Year	Vol. No.	Number of Issues	No. of Contribution	% ge
2016	09	12	485	10.73

2017	10	12	830	18.37
2018	11	12	1030	22.79
2019	12	12	1076	23.81
2020	13	12	1097	24.28
Total	05	60	4518	100

Research Journal of Pharmacy and Technology published 4518 research papers during the period of study i.e. from 2016 to 2020. The journal on an average has published 904 research papers per year. The above table shows that the maximum number of articles was published in the year 2020 with 1097 articles and minimum in the year 2016 with 485 articles. The number of research publications of Research Journal of Pharmacy and Technology for the period 2016 to 2020 has been given year wise in table -1.

Table 2: Issue wise Distribution of Articles

Issue	Volume Number					Total
	Vol.09	Vol.10	Vol.11	Vol.12	Vol.13	
January	17	76	78	84	96	351
February	18	52	76	81	99	326
March	23	51	83	86	95	338
April	30	55	79	96	79	339
May	32	55	83	96	80	346
June	23	74	102	86	90	375
July	48	83	93	85	88	397
August	57	68	90	90	86	391
September	54	61	85	90	88	378
October	70	87	98	98	86	439
November	52	88	83	86	100	409
December	61	80	80	98	110	429
Total	485	830	1030	1076	1097	4518

The table 2 reveals distribution of articles (Issue-wise). Volume No. 13 shows the highest number of total articles. The second highest position is occupied by Volume No.12, It is followed by volume 11. The lowest number of total articles in volume 09. The contribution of articles in volume 13 was more in December.

Table No. 3: Co-Authorship Pattern

Year	Number of Authors					Total
	Single Author	Two Author	Three Author	Four Author	Five and More	
2016	37	436	303	232	426	1434
2017	58	520	681	512	985	2756
2018	79	634	924	540	1315	3492

2019	72	576	882	700	1489	3719
2020	43	432	972	924	1753	4124
Total	289	2598	3762	2908	5968	15525
% age	1.86	16.73	24.23	18.73	38.44	100

Collaborative research is very much a feature of the library and information Science especially during the 21st century. It is a natural reflection of complexity, scale and costs of modern investigations in Library and information Science. Multiauthorship provides different measures of collaboration in the subject. Table 3 reveals the co-authorship pattern of the articles published during the period of study. Maximum number of articles was contributed by five or more authors 5968 (38.44%). This is followed by three authors with 3762 (24.23%) articles, four authors contributed 2908 articles (18.73%) and single author is contributed 289 (1.86%) of the total articles.

5. Degree of Collaboration of the Research Journal of Pharmacy and Technology

The degree of collaboration was calculated using the formula proposed by K. Subramanyam, which is widely used in bibliometric studies to measure collaborative research output in quantitative terms. This formula facilitates the assessment of the proportion of multi-authored papers in relation to the total research output. The present study adopted this established mathematical model to determine the extent of authorship collaboration in the RJPT during the period 2016 to 2020.

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

C = Degree of Collaboration

NM= Number of Multi authored papers

NS= Number of Single authored papers In the present study

NM=15236

NS= 289

$$C = \frac{15236}{15236 + 289} = 0.981$$

Thus the degree of collaboration of The Research Journal of Pharmacy and Technology is 0.936.

Table 4: Classification of Articles According to the length

Length of pages	Year					Total	% ge
	2016	2017	2018	2019	2020		
1-2	18	30	13	1021	869	1951	43.18
3-5	308	449	551	26	82	1416	31.34
6-8	119	286	381	20	108	914	20.23
9+	40	65	85	9	38	237	5.24
Total	485	830	1030	1076	1097	4518	100

Table 4 reveals that the majority of articles 1951 (43.18 %) have the length of 1-2 pages followed by 1416 (31.34%) articles with 3-5 pages, 914 (20.23%) articles with 6-8 pages and 237 (5.24%) articles have the length 9 or more than 9 pages.

Table No.5: Annual Length of the Articles of RJPT

Years	Total Pages	No. of Articles	Annual Average Pages Per Articles
2016	2436	485	5.02
2017	4490	830	5.41
2018	5734	1030	5.57
2019	1360	1076	1.26
2020	2443	1097	2.23
Total	16463	4518	3.65

The table 5 gives the details of the year-wise total pages and number of articles published in these years together with the average length of the articles. the majority of length of pages 5734 (5.57%) have published in 2018, followed by 4490 (5.41%) pages in the year of 2017, and less length of pages published in the year of 2020 i.e.; 2443 (2.23%).

Table 6. Geographical Distribution of Articles

Institute Name	Number of articles	% age
Indian Institute	3270	72.37%
Foreign Institute	1248	27.62%
Total	4518	100

The table 6 showed that most of the contributions are from India with 72.37% and foreign Institute 27.62 % only from foreign institutes.

6. Conclusion

The bibliometric analysis of the Research Journal of Pharmacy and Technology from 2016 to 2020 provides valuable insights into its publication growth and research characteristics. The journal has shown a consistent increase in the number of published articles, reflecting its expanding role in disseminating pharmaceutical research. The predominance of multi-authored papers and the high degree of collaboration indicate a strong inclination toward collaborative research, which is a defining feature of contemporary scientific investigations.

The analysis of article length reveals that a majority of contributions are concise in nature, suggesting an emphasis on brief research communications. Variations in average page length across the study period further reflect changes in publication patterns and editorial practices. Overall, the findings confirm that RJPT has maintained steady growth, increased research productivity, and enhanced collaborative authorship. The study demonstrates that bibliometric indicators are effective tools for assessing journal performance and can assist researchers, editors, and policy-makers in understanding trends in scholarly communication within pharmaceutical sciences.

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