

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

8-2021

Scientometric Analysis of Indian Journal of Traditional Knowledge (IJTK), 2014-2020

Dr. Santosh Gupta

University of Rajasthan, dr.santoshguptaa@gmail.com

Rakesh Kumar Sahu

Govt. Senior Secondary School, Sikrai, Dist. Dausa (Rajasthan), rakeshsahu151@gmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Scholarly Communication Commons](#), and the [Scholarly Publishing Commons](#)

Gupta, Dr. Santosh and Sahu, Rakesh Kumar, "Scientometric Analysis of Indian Journal of Traditional Knowledge (IJTK), 2014-2020" (2021). *Library Philosophy and Practice (e-journal)*. 6089.
<https://digitalcommons.unl.edu/libphilprac/6089>

Scientometric Analysis of Indian Journal of Traditional Knowledge (IJTK), 2014-2020

by

Dr. Santosh Gupta

Assistant Professor

Department of Library and Information Science

University of Rajasthan, Jaipur (Rajasthan) - India, PIN-302004

E-mails: santosh.guptaa@gmail.com; santoshgupta@uniraj.ac.in

&

Rakesh Kumar Sahu

Librarian

Govt. Senior Secondary School, Sikrai, Dist. Dausa (Rajasthan) - India, PIN-303303

E-mail: rakeshsahu151@gmail.com

Abstract:

Traditional knowledge (TK) is indigenous knowledge, innovation, and practices developed, preserved, and passed down from one generation to other within a community, typically as a part of the community's cultural or spiritual identity. Traditional knowledge in its broadest sense encompassed both contents of knowledge and traditional cultural expressions, including specific signs and symbols associated with it. Scientometric is a technique and tool used to measure quantitative scientific activity and productivity of publication. This paper provides research trends in traditional knowledge through a critical scientometric analysis of 705 research articles published in 28 issues of the “Indian Journal of Traditional Knowledge (IJTK)” during 2014-2020. In the present study, various scientometric techniques such as distribution of articles, the annual growth rate of the journal, authorship pattern, authors productivity, degree of collaboration, collaborative index, and city, state & countrywide distribution of articles have been adopted to investigate the research output of IJTK. The study describes that a maximum of 106 articles (15.04% sharing of total articles) were published in the year 2020. Out of 705 articles, 31 (4.4%) articles were contributed by the single authors. Overall authors per paper, degree of collaboration, average collaborative index, and average citation per paper were 28.8, 1, 4.25, and 29.29 respectively. India is the top ranker with remarkable 431 contributions constituting 61.13% sharing.

Keywords: Scientometrics, Bibliometrics, Citation analysis, Authors productivity, Collaborative Index (CI), Indian Journal of Traditional Knowledge (IJTK)

Introduction

Research publications are the embodiments of intellectual thought contents presented in the published literature. The fundamental purpose of a research publication is to spread new ideas or information to any specific field of knowledge to advance the subject or discipline. In this context, scientometric or bibliometric research is considered one of the most important fields of research in Library and Information Science. Scientometric is a quantitative technique and tool useful in measuring the scientific productivity of the publication. It is a statistical method for evaluating research output and productivity of a research organization, publication of a particular subject area, and research activities or research growth on particular literature. Presently it is also used to measure and analyse the growth and utility of the publication in a particular journal. Furthermore, the scientometric study is employed as an instrument in the collection building policy of any institution/organisation or university by providing precise and essential information to the management to help them make the right decision at the right time to procure the publication.

1. Review of Literature

For conducting this scientometric study, several previous studies have been carried out. Some of the significant researches are worth mentioning here to provide a comprehensive perspective on the current research topic.

Coles and Eales (1917) published the first study on bibliometrics in 1917, titled “Statistical analysis of literature of history of comparative anatomy”. This research serves as a model for using the counting technique to evaluate international activities.

Pritchard (1969) coined the term “Bibliometrics” in 1969 to mean “the application of mathematics and statistical methods” to books and other scholarly communications.

Jena, Swain, and Sahoo (2012) in their article “Annals of Library and Information Studies, 2002–2010: A Bibliometric Study” found that contribution of articles to each volume of “Annals of Library & Information Studies (ALIS)” is constantly increasing from year to year. It has 16 citations per article on average. The study also reveals that remarkable contributors were from India in regards to country productivity.

Kolle (2016) studied bibliometric analysis of 990 articles of “Indian Journal of Traditional Knowledge (IJTK)” published from 2007 to 2015 collected from the Web of Science database. He found that an average of 110 articles was published per year. The articles published in the year 2007 received maximum number of citations. The majority of the articles were contributed from India and by more than one author. The degree of collaboration was 0.902, indicating that collaborative research predominated in the journal's publications, while the "Indian Journal of Traditional Knowledge" was the most cited journal.

Lamirel, Jain, and Babbar (2017) edited book titled “Trends in Bibliometrics and Scientometrics Studies” contains 30 research papers contributed by experts from various corners of the world. This book provides research trends in bibliometrics and scientometrics in science, communication in science, science polity, and almost in all scientific fields. It gives an insight for the researchers, scientists, social scientists, stakeholders, and policymakers on the development of scientific literature and analysis.

Shivakumaraswamy and Muthuraj (2017) evaluated 938 articles of the “Indian Journal of Traditional Knowledge” from 2002 to 2012. According to them, the IJTK grew from 10 articles in 2002 to 139 articles in 2012. Most articles, 139 (14.81%), were published in 2010, while the fewest, 10 (1.06%), was published in 2003.

Mondal and Raychoudhury (2018) examined 3420 articles to find the publication pattern of contributions of foreign-affiliated authors in Indian LIS journals and indexed by the Indian Citation Index (ICI) during the study period 2004 to 2016. They identified that foreign-affiliated authors from 57 countries contributed a total of 445 articles which shares 13.01% of its total publications. in 12 Indian LIS journals. “COLLNET Journal of Scientometrics and Information Management (CJSIM)” has been identified as the most preferred Indian journal followed by “DESIDOC Journal of Library & Information Technology (DJLIT)” and “Annals of Library & Information Studies (ALIS)”. Maximum research papers have been published by Nigerian authors in Indian LIS journals. The study also demanded that Indian authors should give a top priority to foreign authors to increase international collaboration and publish their articles in Indian library science journals.

Pathak and Bharati (2018) in their article titled “Growing visibility and impact of Indian Journal of Traditional Knowledge” examined research papers published in the IJTK from 2007 to 2017 on several scientometric characteristics. They discovered that 16 research papers including 7 papers from foreign countries received 20 or more citations. They also observed that 9 citing journals with high impact factor (≥ 10) have cited the research papers published in IJTK, including two Nature publishing group journals namely “Nature Biotechnology” (with Impact Factor 41.66) and “Nature Climate Change” (with Impact Factor 19.3).

Kannan and Thanuskodi (2019) analysed 20 years of data of “Library Philosophy and Practice (e-journal)” using the Scopus database published by Elsevier from 1998 to 2018. They examined 1402 contributions published during the period. They analysed that the highest 195 (13.91%) articles were published in 2011 whereas the lowest 3 (0.21%) articles were published in 1998. They also revealed that the maximum number of 11276 (92.51%) articles were published under the research article category whereas 90 articles (6.42%) were published under the review category. Most of the researchers preferred the single authorship mode as 591 articles (42.16%) articles were written by a single author. Nigeria 550 (39.23%) was the top rank country followed by India contributing 310 articles (22.11%). The University of Ibadan contributed the highest 55 articles (3.92%) followed by the University of Nigeria 55 (3.92%) articles under the institution-wise distribution.

Saberi, Barkhan, and Hamzehei (2019) carried out the bibliographic analysis of “Library Philosophy and Practice” by taking 20 years of data from 1998 to 2018 using bibliometric indicators and visualization applications such as VOS viewer. Their research indicated the ascending order of the process of publications ($R^2=0.69$) and citations received by research papers published in the said journal. Their research paper concluded that LPP's most productive and prominent authors, universities, and countries were Bhatti, R. (19 articles), Nigeria (549 articles), and the University of Ibadan (78 articles), respectively. they also revealed that "Library Philosophy and Practice", "Scientometrics", and "The Electronic Library" were the top journals based on the references cited in the articles published in LPP.

Pradhan (2020) measured scientometric analysis of “Annals of Library and

Information Studies (ALIS)” of 231 research articles published in the journal during 2011-2017. According to his research, a maximum of 38 research papers were published in the year 2015 with 16.45% sharing. A total of 82 (35.50 %) of the 231 articles were authored by single writers. Overall, there were 1.91 authors per article, 0.77 the degree of collaboration, 2.37 collaborative index, and 20.01 citations per article. The study also revealed that the highest number of contributors hailed from India with 74.21% sharing.

A citation is a tool that is commonly used to give credit to authors for their intellectual contributions and creative ideas that are quoted or cited as a supporting idea in a research study. Citations are useful in preventing plagiarism in formal scholarly communication. The author's name is usually the first element in a citation, except in cases where the information source does not have an author. **Gupta (2021)** identified the missing and errors in authors cited in Library and Information Science literature. He examined that 538 verifiable journal references appended to five LIS theses, a total of 924 authors were cited. According to his study, 149 (16.13%) of the author names cited in 114 (20.8%) journal references were incorrect.

2. Objectives

The key objective of this study is to determine the publication trends in IJTK from 2014 to 2020. The main objectives of the study are as follows:

- To study the year-wise distribution of articles published in IJTK.
- To study the authorship pattern and distribution of the articles.
- To study the annual growth rate (AGR) of articles.
- To study the degree of collaboration (DC) and collaborative index (CI) of IJTK.
- To study the country-wise, state-wise, and city-wise geographical distributions of authors.
- To study the international collaboration among authors.

3. Scope and Limitation

The present study is confined to conduct scientometric analysis in traditional knowledge and allied areas by collecting data from 28 issues of the 7 volumes of the “Indian Journal of Traditional Knowledge (IJTK)” from 2014 to 2020. Since its first publication published in July 2002, the journal has been published regularly. The IJTK is a leading journal covering the major findings around the globe in the area of biological activities derived from the plant, animals, and minerals that are used in traditional healthcare systems such as Ayurveda, Folk-remedies, Homoeopathy, Naturopathy, Siddha, Unani, and Yoga, etc. The journal is being published by the “Council of Scientific and Industrial Research - National Institute of Science Communication and Information Resources (CSIR-NISCAIR), New Delhi” quarterly since October 2002. This journal publishes original research papers, review articles, short communications, etc. in the mentioned areas. This journal is a peer-reviewed scholarly open access journal with impact factor 0.757 (JCR 2020) and H-33 which

is considerably high in the area of folk medicine. IJTK has been indexed in the world's reputed databases like Science Citation Index (SCI) since 2009 with coverage of research articles from 2007 onwards and WIPO (World Intellectual Property Organization). The study of the impact and global visibility of IJTK will reflect the status of indigenous knowledge covered, trends of research, and set goals to include the area/ tribes for unpublished literature of traditional medicine. Therefore, a scientometric analysis of this famous journal is of great importance.

This paper focuses on scientometric studies of articles of IJTK published from 2014 to 2020 by using scientometric techniques and emphasises the various aspects of the journal's scientific content such as year-wise distribution of articles, author contribution, authors productivity, authorship pattern, year-wise single and multi-authored distribution, degree of collaboration, collaborative index, cited reference distribution pattern, year-wise references citations, country-wise, state-wise and city-wise geographical distribution of articles and international collaboration for publication of research articles in IJTK during 2014-2020 distributed over 28 issues of the journals.

4. Methods and Tools

The data required for this research has been extracted from the published volumes of the journal "Indian Journal of Traditional Knowledge (IJTK)" available on NISCAIR Online Periodicals Repository (<http://nopr.niscair.res.in>). The bibliometric and scientometric method is used to analyse and to study the attributes of the articles published in IJTK from 2014 to 2020. Seven volumes (Vol. 13 to 19) containing 28 issues and 705 articles were considered for the scientometric analysis. A total number of 705 articles has been collected, organized, analysed. Statistical calculation and graphical representation have been done using Microsoft Excel spreadsheet and distinguished according to different types of scientometric elements.

The degree of collaboration (DC) of the contributors is defined as the ratio between the number of multiple-authored papers and the total number of research papers (i.e., the number of multiple-authored papers plus the number of single-authored papers) in the discipline during a specific period. It is derived by using the formula suggested by Subramanyam (1983).

This formula can be represented as follows:

$$DC = Nm / (Nm + Ns)$$

Where, DC = Degree of collaboration in the particular subject

Nm = No. of multi-authored papers in the particular subject published during a year

Ns = No. of single-authored papers in the particular subject published during a year.

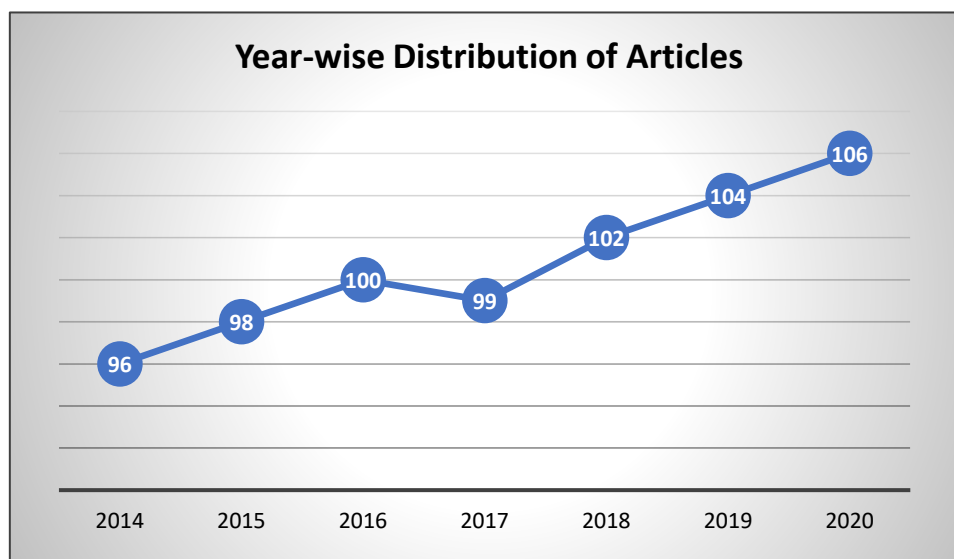
5. Result and Discussion

5.1. Year wise Distribution of Articles

Table 1: Year wise Distribution of Articles

| Year | Vol. No. | Issue | No. of Articles | % Age | Cumulative % |
|--------------|----------|-------|-----------------|------------|--------------|
| 2014 | 13 | 4 | 96 | 13.62 | 13.62 |
| 2015 | 14 | 4 | 98 | 13.9 | 27.52 |
| 2016 | 15 | 4 | 100 | 14.18 | 41.7 |
| 2017 | 16 | 4 | 99 | 14.04 | 55.74 |
| 2018 | 17 | 4 | 102 | 14.47 | 70.21 |
| 2019 | 18 | 4 | 104 | 14.75 | 84.96 |
| 2020 | 19 | 4 | 106 | 15.04 | 100 |
| Total | | | 705 | 100 | |

Table 1 provides the year-wise chronological distribution of research papers published in IJTK during the study period from 2014 to 2020. A total of 705 research papers were published, out of which the maximum of 106 (15.04%) research articles was published in 2020 (volume 19) followed by 2019 (14.75%), 2018 (14.47%), and 2016 (14.18%) respectively. A minimum of 96 (13.62%) research papers were published in 2014. Thus, IJTK has averaged 25 articles per issue and averaged 100 articles per year and it is continuously increasing each year.

**Figure 1:** Year-wise Distribution of Articles

5.2. Authorship Pattern

Table 2: Authorship Pattern

| Sl. No. | Rank | Authorship Pattern | No of Articles | % of Articles | Cumulative Articles | Cumulative % of Articles |
|---------|------|--------------------|----------------|---------------|---------------------|--------------------------|
| 1 | 1 | Three and more | 531 | 75.3 | 531 | 75.3 |
| 2 | 2 | Two | 143 | 20.3 | 674 | 95.6 |
| 3 | 3 | Single | 31 | 4.4 | 705 | 100.0 |

Table 2 and figure 2 shows authorship patterns like single-authored, two-authored and three or more than three authored articles published during the study period from 2014 to 2020. It shows that the maximum authors preferred to publish their papers in three or more authorship mode 531 (75.3%) followed by two authorship mode 143 (20.3%) whereas only

31 (4.4%) articles were published by individual authorship mode which was quite negligible as compared to others.

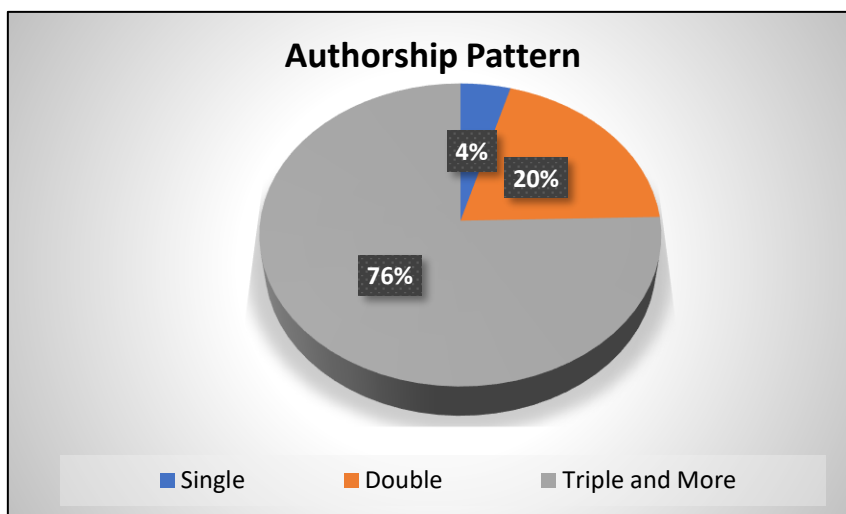


Figure 2: Contribution of Author

5.3. Authorship Contribution

Table 3: Authorship Pattern – Single and Joint-Authorship Contributions

| Pattern | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | No. of Articles | %age |
|--------------|-----------|-----------|------------|-----------|------------|------------|------------|-----------------|------------|
| Single | 5 | 6 | 5 | 6 | 5 | 0 | 4 | 31 | 4.4 |
| Joint | 91 | 92 | 95 | 93 | 97 | 104 | 102 | 674 | 95.6 |
| Total | 96 | 98 | 100 | 99 | 102 | 104 | 106 | 705 | 100 |

Table 3 and figure 3 show the authorship pattern of articles published in IJTK. It is found that the maximum number of papers were contributed in joint authorship (Co-authorship) mode with 674 (95.60% sharing) papers out of total 705 records and 31 (4.40%) articles were authored in the single authorship mode which is quite negligible as compared to joint authorship mode. More than 95% of papers were published in joint authorship mode, which reveals that most of the authors are interested in collaborative research.

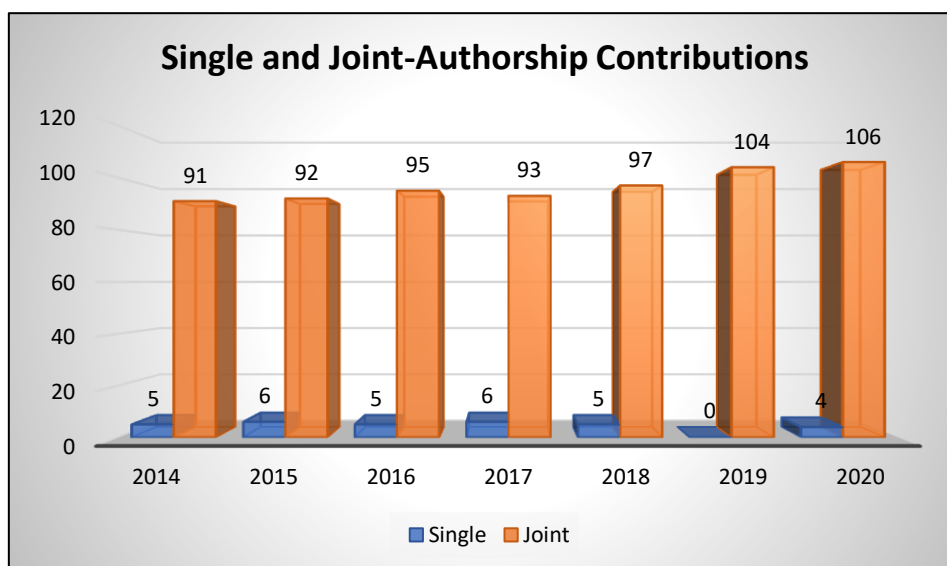


Figure 3: Authorship Pattern

5.4. Authors Productivity

Table 4: Year-wise Authors Productivity

| Year | Total Articles | Authors | AAPP* | Productivity per Author |
|--------------|----------------|-------------|-------------|-------------------------|
| 2014 | 96 | 332 | 3.45 | 0.28 |
| 2015 | 98 | 388 | 3.95 | 0.25 |
| 2016 | 100 | 395 | 3.95 | 0.25 |
| 2017 | 99 | 412 | 4.16 | 0.24 |
| 2018 | 102 | 437 | 4.28 | 0.23 |
| 2019 | 104 | 477 | 4.58 | 0.21 |
| 2020 | 106 | 470 | 4.43 | 0.22 |
| Total | 705 | 2911 | 28.8 | 1.68 |

*AAPP- Average Author Per Papers

Table 4 shows the overall productivity per author and average author per paper (AAPP) from 2014 to 2020.

The average authors calculated the AAPP and the formula used for productivity per author is as follows:

$$\text{AAPP per author} = (\text{Number of authors})/(\text{Number of papers})$$

$$\text{Productivity per author} = (\text{Number of papers})/(\text{Number of authors})$$

The maximum AAPP at 4.58 with minimum productivity per author at 0.21 in 2019 and the minimum AAPP as 3.45 with maximum productivity per author is 0.28 in 2014.



Figure 4: Year-wise Authors Productivity

5.5. Year-wise Single and Multi-Authored Papers

Table 5: Year-wise Single and Multi-Authored Papers

| Year | Single-Authored Papers | Multi-Authored Papers | Total Papers | Cumulative % |
|------|------------------------|-----------------------|--------------|--------------|
| 2014 | 5 | 91 | 96 | 13.62 |
| 2015 | 6 | 92 | 98 | 13.9 |

| | | | | |
|--------------|-----------|------------|------------|------------|
| 2016 | 5 | 95 | 100 | 14.18 |
| 2017 | 6 | 93 | 99 | 14.04 |
| 2018 | 5 | 97 | 102 | 14.47 |
| 2019 | 0 | 104 | 104 | 14.75 |
| 2020 | 4 | 102 | 106 | 15.04 |
| Total | 31 | 674 | 705 | 100 |

Table 5 and figure 5 indicate the year-wise distribution of single-authored and multi-authored papers from 2014 to 2020. Out of 705 research offerings, 31 articles were single-authored, while the rest 674 papers were contributed by joint authors. According to the findings, the majority of research articles were published by joint authors.

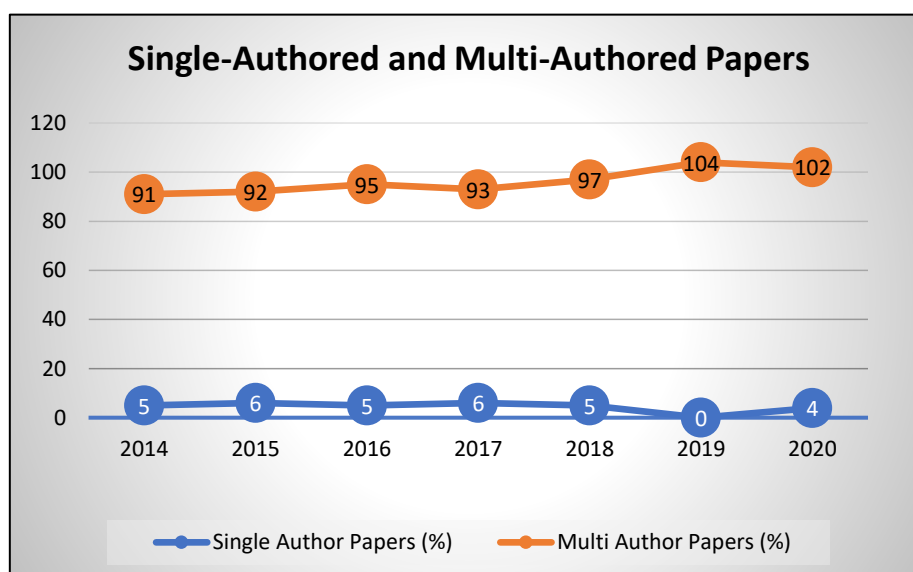


Figure 5: Year-wise Single and Multi-Authored Papers

5.6. Degree of Collaboration

Table 6: Degree of Collaboration

| Year | Ns* | Nm* | Total (Ns + Nm) | DC |
|-------------|-----|-----|-----------------|------|
| 2014 | 5 | 91 | 96 | .94 |
| 2015 | 6 | 92 | 98 | .93 |
| 2016 | 5 | 95 | 100 | .95 |
| 2017 | 6 | 93 | 99 | .93 |
| 2018 | 5 | 97 | 102 | .95 |
| 2019 | 0 | 104 | 104 | 1 |
| 2020 | 4 | 102 | 106 | .96 |
| Total | 31 | 674 | 705 | 0.95 |

Ns*- Single-Authored Papers

Nm*- Multi-Authored Papers

DC- Degree of Collaboration

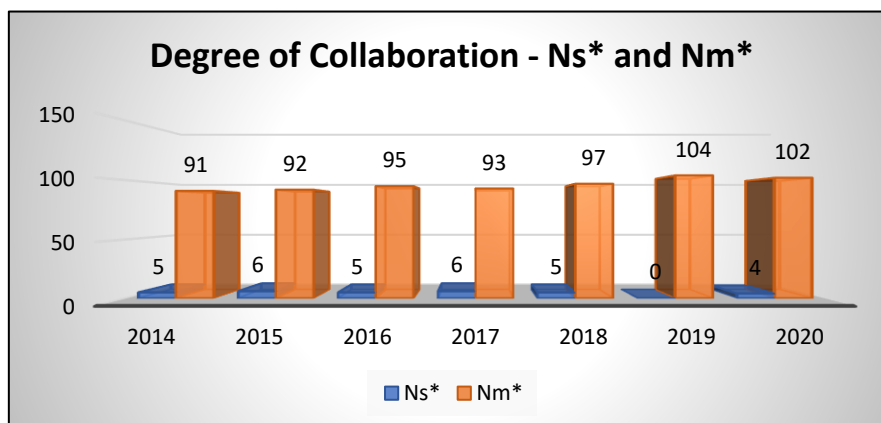


Figure 6: Degree of Collaboration

Table 6 and figure 6 show the degree of collaboration of authors in the publication of research papers. Table and figure clearly indicate that 1 was the highest value of DC observed in 2019 followed by 0.96 in the year 2020 and the lowest value of DC was 0.93 in 2015 and 2017. The DC was found in between 0.90-1.00 during the period 2014 to 2020 and the overall value of DC was 0.95 during the study span. The overall Degree of Collaboration of authors can be calculated as:

$$DC = 674 / (874 + 31) = 0.956$$

Since the DC value exceeds 0.5 and tends to be 1, multiple authors are considered prominent in the research and are based on team research rather than individual research.

5.7. Collaborative Index of Articles

Table 7: Year-wise Collaborative Index of Articles

| Year | Multi-Authored Papers | Total Authors of Multi-Authored Papers | Collaborative Index (CI) |
|-------|-----------------------|--|--------------------------|
| 2014 | 91 | 327 | 3.59 |
| 2015 | 92 | 382 | 4.15 |
| 2016 | 95 | 390 | 4.1 |
| 2017 | 93 | 406 | 4.36 |
| 2018 | 97 | 432 | 4.45 |
| 2019 | 104 | 474 | 4.55 |
| 2020 | 102 | 466 | 4.56 |
| Total | 674 | 2877 | 4.25 |

Collaborative Index of research articles is the ratio of the total number of authors and the total number of joint articles. For this analysis, the authors omitted the single-authored research papers which are equal to 1 always. The formula used to calculate the mean number of authors per jointly-authored paper is as follows:

$$\text{Collaborative Index (CI)} = (\text{Total Number of Author}) / (\text{Total Joint Papers})$$

Table 7 and figure 7 clearly indicate that there were the maximum CI (4.56) in 2020 and the minimum CI (3.59) in 2014. There was an average collaborative index of 4.2 from 2014 to 2020.

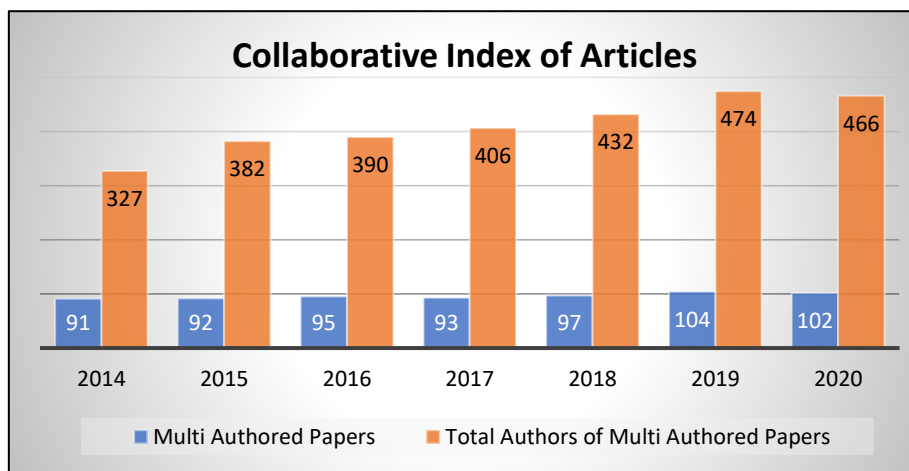


Figure 7: Year-wise Collaborative Index of Articles

5.8. Cited Reference Distribution Pattern

Table 8: Year-wise Cited Reference Distribution Pattern

| Year | Vol. | No. of Papers | Total No. of References | Avg. No. of References Per Articles % | %age |
|--------------|------|---------------|-------------------------|---------------------------------------|--------------|
| 2014 | 13 | 96 | 2481 | 25.84 | 12.01 |
| 2015 | 14 | 98 | 2251 | 22.96 | 10.9 |
| 2016 | 15 | 100 | 2540 | 25.4 | 12.3 |
| 2017 | 16 | 99 | 3050 | 30.8 | 14.77 |
| 2018 | 17 | 102 | 3127 | 30.65 | 15.14 |
| 2019 | 18 | 104 | 3533 | 33.97 | 17.1 |
| 2020 | 19 | 106 | 3673 | 34.65 | 17.78 |
| Total | | 705 | 20655 | 29.29 | 100 % |

Table 8 and figure 8 show the year-wise number of references cited by authors in their articles. There were 705 articles with a total of 20655 references used during the study period from 2014 to 2020. The maximum number of 3673 citations with 34.65% average number of references per article sharing was determined in 2020, and the minimum number of 2251 citations with 22.96% reference citations was found in 2015.

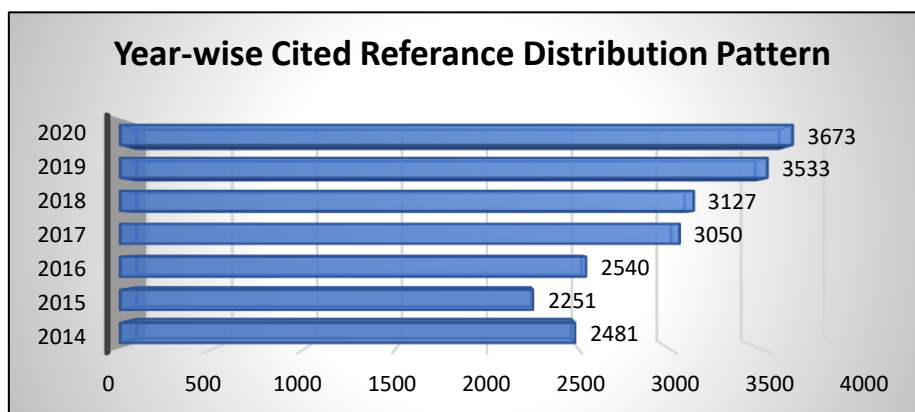


Figure 8: Year-wise Cited Reference Distribution

5.9. Year-wise References Citations

Table 9: Year-wise References Citations

| Year-wise References Citations | 1-10 | 11-20 | 21-30 | 31-40 | > 40 | Total |
|--------------------------------|-----------|------------|------------|------------|------------|------------|
| 2014 | 12 | 29 | 24 | 17 | 14 | 96 |
| 2015 | 6 | 40 | 36 | 8 | 8 | 98 |
| 2016 | 5 | 31 | 34 | 21 | 9 | 100 |
| 2017 | 3 | 18 | 38 | 18 | 22 | 99 |
| 2018 | 3 | 15 | 35 | 32 | 17 | 102 |
| 2019 | 3 | 17 | 31 | 27 | 26 | 104 |
| 2020 | 4 | 25 | 20 | 27 | 30 | 106 |
| Total | 36 | 175 | 218 | 150 | 126 | 705 |

Table 9 and figure 9 depict the year-wise number of references cited by the authors in their research papers. For the 705 articles, a total of 218 articles (30.92%) had 21-30 references followed by 175 articles (24.82%) with 11-20 references, 150 articles (21.28 %) had 31-40 references, 126 articles (17.87%) with more than 40 references and 36 articles (5.11%) had 1-10 references. Most of the articles were written with references to 21-30.

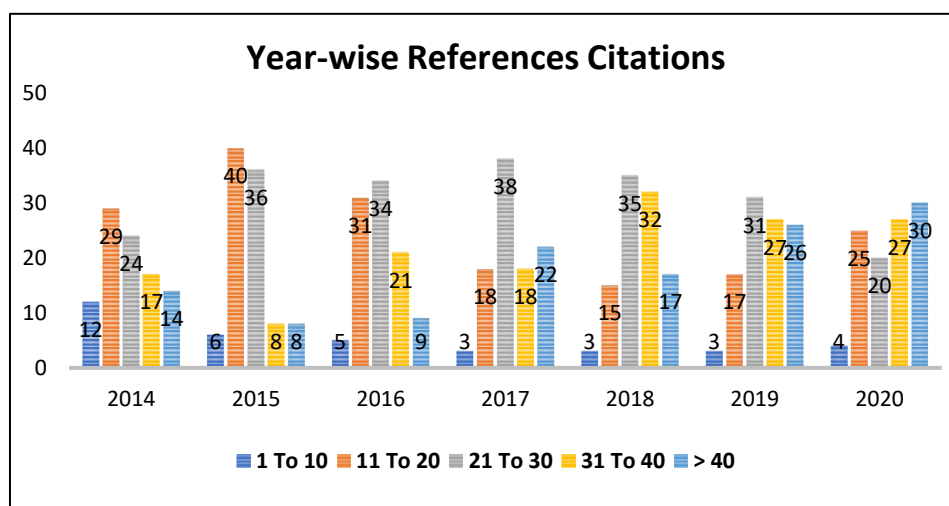


Figure 9: Year-wise Reference Citations

5.10. Country-wise Geographical Distribution of Articles

Table 10: Country-wise Distribution of Articles

| Sr. No. | Country | No. of Articles | %age of Total Articles (705) | Rank |
|----------|--------------|-----------------|------------------------------|------|
| 1 | India | 431 | 61.13 | 1 |
| 2 | Turkey | 60 | 8.51 | 2 |
| 3 | Iran | 23 | 3.26 | 3 |
| 4 | South Africa | 22 | 3.12 | 4 |
| 5 | Brazil | 15 | 2.13 | 5 |
| 6 | Pakistan | 15 | 2.13 | 5 |
| 7 | Chain | 10 | 1.42 | 6 |
| 8 | Mexico | 9 | 1.28 | 7 |

| | | | | |
|----|--------------------|---|------|----|
| 9 | Thailand | 9 | 1.28 | 7 |
| 10 | Malaysia | 7 | 0.99 | 8 |
| 11 | Nigeria | 7 | 0.99 | 8 |
| 12 | Sri Lanka | 7 | 0.99 | 8 |
| 13 | Philippines | 6 | 0.85 | 9 |
| 14 | Egypt | 5 | 0.72 | 10 |
| 15 | Ethiopia | 5 | 0.72 | 10 |
| 16 | Republic of Serbia | 5 | 0.72 | 10 |
| 17 | Saudi Arabia | 5 | 0.72 | 10 |
| 18 | USA | 5 | 0.72 | 10 |
| 19 | Algeria | 4 | 0.57 | 11 |
| 20 | Bangladesh | 4 | 0.57 | 11 |
| 21 | Indonesia | 4 | 0.57 | 11 |
| 22 | Nepal | 4 | 0.57 | 11 |
| 23 | Georgia | 3 | 0.43 | 12 |
| 24 | Italy | 3 | 0.43 | 12 |
| 25 | Benin | 2 | 0.28 | 13 |
| 26 | Korea | 2 | 0.28 | 13 |
| 27 | Poland | 2 | 0.28 | 13 |
| 28 | Tanzania | 2 | 0.28 | 13 |
| 29 | Australia | 1 | 0.14 | 14 |
| 30 | Belgium | 1 | 0.14 | 14 |
| 31 | Bulgaria | 1 | 0.14 | 14 |
| 32 | Cameroon | 1 | 0.14 | 14 |
| 33 | Canada | 1 | 0.14 | 14 |
| 34 | Colombia | 1 | 0.14 | 14 |
| 35 | Czech Republic | 1 | 0.14 | 14 |
| 36 | Denmark | 1 | 0.14 | 14 |
| 37 | East Africa | 1 | 0.14 | 14 |
| 38 | France | 1 | 0.14 | 14 |
| 39 | Harare | 1 | 0.14 | 14 |
| 40 | Jakarta | 1 | 0.14 | 14 |
| 41 | Jordan | 1 | 0.14 | 14 |
| 42 | Lebanon | 1 | 0.14 | 14 |
| 43 | Lithuanian | 1 | 0.14 | 14 |
| 44 | Magnolia | 1 | 0.14 | 14 |
| 45 | Montenegro | 1 | 0.14 | 14 |
| 46 | Morocco | 1 | 0.14 | 14 |
| 47 | Namibia | 1 | 0.14 | 14 |
| 48 | New Zealand | 1 | 0.14 | 14 |
| 49 | Portugal | 1 | 0.14 | 14 |
| 50 | Republic of Korea | 1 | 0.14 | 14 |
| 51 | Serbia | 1 | 0.14 | 14 |
| 52 | Slovenia | 1 | 0.14 | 14 |
| 53 | South Korea | 1 | 0.14 | 14 |
| 54 | Spain | 1 | 0.14 | 14 |
| 55 | Tunisia | 1 | 0.14 | 14 |
| 56 | Uganda | 1 | 0.14 | 14 |

| | | | | |
|----|--------------|------------|------|----|
| 57 | UK | 1 | 0.14 | 14 |
| | Total | 705 | | |

Table 10 provides the percentage of the country-wise geographical distribution of articles. A total number of 705 research articles were contributed from 57 countries during the period 2014-2020. Out of this, 431 (61.13%) articles were contributed by India, followed by 60 (8.51%) from Turkey and 23 (3.26%) received from Iran which is in third place. This table clearly reveals that near about 60% of contributors are from India, indicating that Indian researcher’s contribution is very high as compared to contributors from other countries.

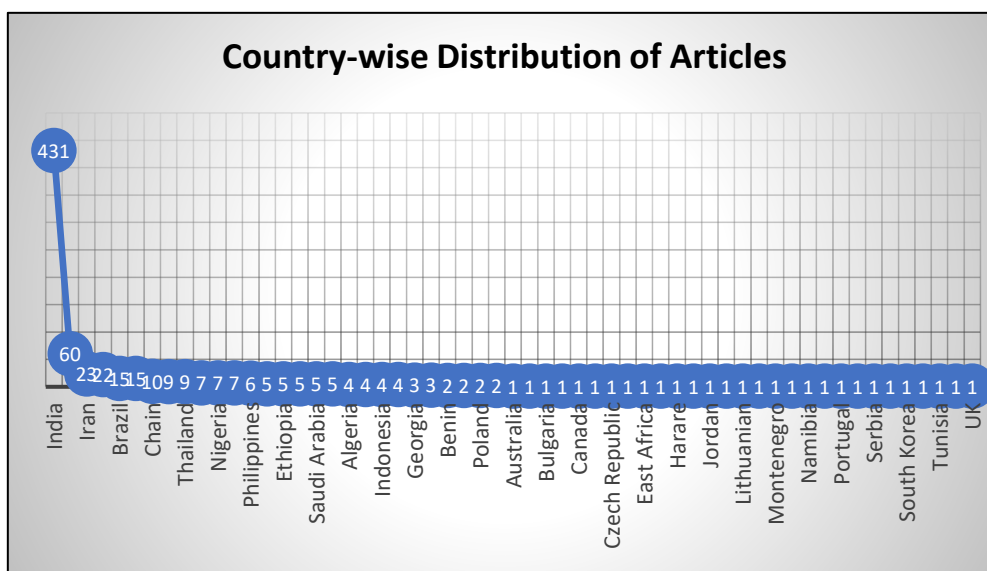


Figure 10: Country-wise Distribution of Articles

5.11. State-wise Distribution of Articles

Table 11: State-wise Distribution of Articles (Top 10 State)

| Sr. No. | State Name | No. of Articles | %age | %age of 431 | Rank |
|---------|---------------|-----------------|------------|--------------|------|
| 1 | Uttar Pradesh | 47 | 16.43 | 10.9 | 1 |
| 2 | New Delhi | 42 | 14.69 | 9.75 | 2 |
| 3 | Karnataka | 36 | 12.59 | 8.35 | 3 |
| 4 | West Bengal | 31 | 10.84 | 7.19 | 4 |
| 5 | Maharashtra | 28 | 9.79 | 6.5 | 5 |
| 6 | Assam | 27 | 9.44 | 6.26 | 6 |
| 7 | Tamil Nadu | 26 | 9.09 | 6.03 | 7 |
| 8 | Uttarakhand | 18 | 6.29 | 4.18 | 8 |
| 9 | Gujarat | 16 | 5.59 | 3.71 | 9 |
| 10 | Haryana | 15 | 5.25 | 3.48 | 10 |
| | Total | 286/431 | 100 | 66.35 | |

Table 11 shows the percentage of state-wise distribution of 431 contributors from the top ten states. Out of this, 47 (10.90%) articles contributed from Uttar Pradesh, followed by 42 (9.75%) from New Delhi and 36 (8.35%) of contributions received from Karnataka.

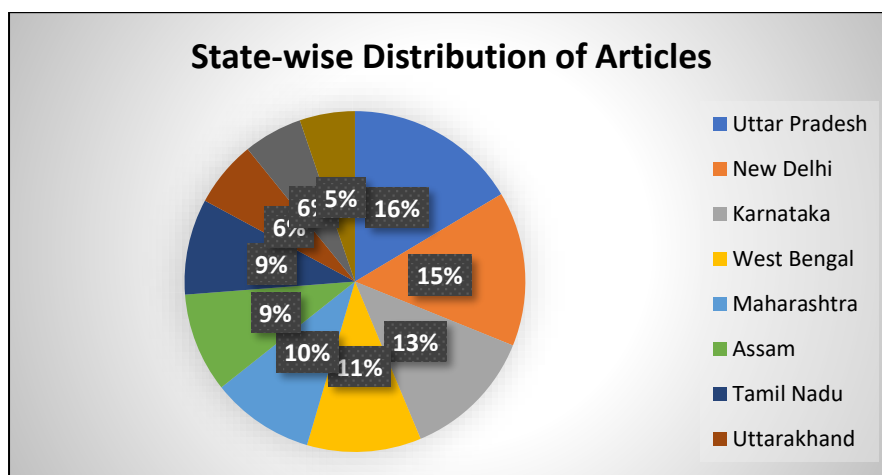


Figure 11: State-wise Distribution of Articles

5.12. City-wise Distribution of Articles

Table 12: City-wise Distribution of Articles (Top 10 Cities)

| Sr. No. | City Name | Total No. of Articles | %age | %age of 431 | Rank |
|---------|--------------|-----------------------|------------|--------------|------|
| 1 | New Delhi | 41 | 28.47 | 9.51 | 1 |
| 2 | Lucknow | 18 | 12.5 | 4.18 | 2 |
| 3 | Kolkata | 14 | 9.73 | 3.25 | 3 |
| 4 | Bangalore | 14 | 9.73 | 3.25 | 3 |
| 5 | Varanasi | 10 | 6.94 | 2.32 | 4 |
| 6 | Ranchi | 10 | 6.94 | 2.32 | 4 |
| 7 | Karnal | 10 | 6.94 | 2.32 | 4 |
| 8 | Jammu | 9 | 6.25 | 2.09 | 5 |
| 9 | Guwahati | 9 | 6.25 | 2.09 | 5 |
| 10 | Mysore | 9 | 6.25 | 2.09 | 5 |
| | Total | 144/431 | 100 | 33.42 | |

Table 12 and corresponding figure 13 shows the percentage of city-wise distribution of 431 contributors from the top ten cities. Out of 144 articles, 41 (9.51%) articles were a contribution from New Delhi, followed by 18 (4.18%) from Lucknow followed by 14 (3.25%) from Kolkata and Bangalore.

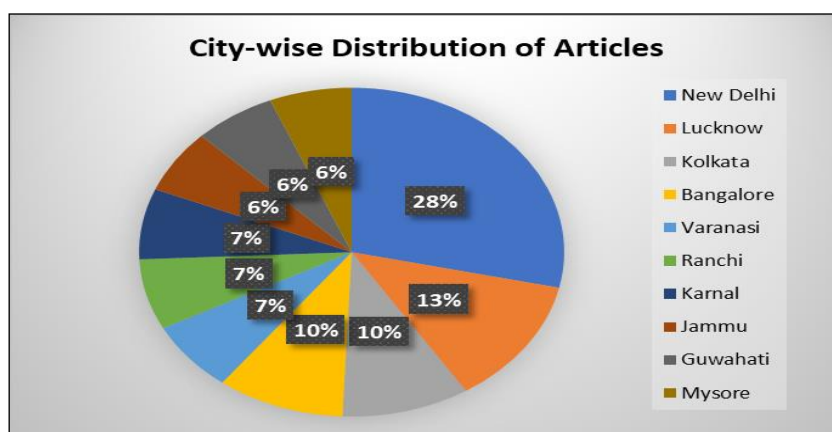


Figure 12: City-wise Distribution of Articles

5.13. International Collaboration for Publication of Research Articles

Table 13: International Collaboration

| Sr. No. | Total Articles | Two Countries Collaboration | More than Two Countries |
|---------|----------------|-----------------------------|-------------------------|
| 1 | 705 | 57 (8.09%) | 6 (0.85%) |

From Table 13 and figure 13, it is clear that a total number of 63 (8.94% of total articles) research articles have international collaboration in writing research articles published in IJTK. Out of the total of 705 research articles, 57 articles (8.09% of total articles) have collaborations between two countries whereas only 6 articles containing 0.85% of total research papers have more than two countries collaborations. The geographical distribution of articles is based on the affiliation addresses of the authors given in the article. This reveals that IJTK is very popular at the international level for research in the field of traditional knowledge and allied areas.

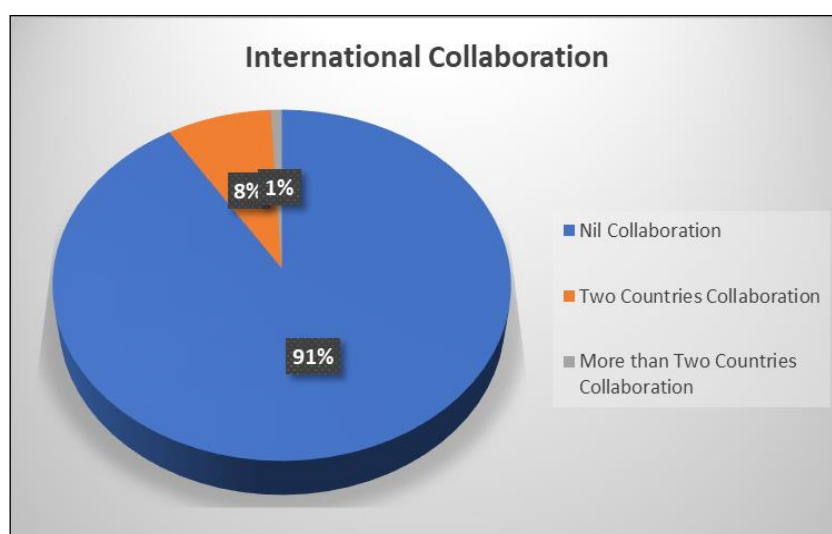


Figure 13: International Collaboration

6. Conclusion

An attempt is made to divulge scientometric aspects of articles published in the “Indian Journal of Traditional Knowledge (IJTK)” for the years 2014 to 2020. During this period of publication of IJTK, a total number of 705 research articles were published in its seven volumes ranging from Vol. 13 to Vol. 19. A maximum number of 106 articles were published in the year 2020 with 15.04% of the total articles. Only 31 (4.4%) articles were contributed by the individual authors. This shows that researchers preferred the multiple-authorship patterns to publish their research papers in IJTK. The maximum AAPP is 4.58 with minimum productivity per author 0.21 in 2019. The highest value of DC and CI has been calculated in 2019, and 2020 respectively. Overall, researchers from 57 countries contributed their research articles during the period of study. India got the first rank with 431 contributions with 61.13% sharing followed by Turkey (8.51%) and Iran (3.26%) with second and third position respectively. In this study, it is observed that the authors used 20655 references in total 705 articles and its overall average citations per paper were 29.29.

References

- Cole, F. J., & Eales, N. B. (1917). The history of comparative anatomy: Part I.—A statistical analysis of the literature. *Science Progress (1916-1919)*, 11(44), 578–596. JSTOR. <http://www.jstor.org/stable/43426882>
- Groos, O. V., & Pritchard, A. (1969). Documentation notes. *Journal of Documentation*, 25(4), 344–349. <https://doi.org/10.1108/eb026482>
- Gupta, V. K. (2021). Missing and defective identity of authors cited in Library and Information Science literature. *Library Philosophy and Practice (e-Journal)*, 18. <https://digitalcommons.unl.edu/libphilprac/5699>
- Jena, K. L., Swain, D. K., & Sahoo, K. C. (2012). Annals of Library and Information Studies, 2002-2010: A bibliometric study. *Library Philosophy and Practice (e-Journal)*, 15. <https://digitalcommons.unl.edu/libphilprac/716>
- Kannan, P., & Thanuskodi, S. (2019). Bibliometric analysis of Library Philosophy and Practice: A study based on Scopus database. *Library Philosophy and Practice (e-Journal)*, 14. <https://digitalcommons.unl.edu/libphilprac/2300>
- Kolle, S. R. (2016). Publication trends in Indian Journal of Traditional Knowledge: A bibliometric analysis. *Journal of Advancements in Library Sciences*, 3(2), 25–34. <https://doi.org/10.37591/joals.v3i2.345>
- Lamirel, J.-C., Jain, P. K., & Babbar, P. (2017). *Trends in bibliometrics and scientometrics studies: Proceedings of 12th International conference on Webometrics, Informetrics, and Scientometrics (WIS) and the 17th COLLNET meeting 2016, December 12-15, 2016, Nancy, France*. Athena Academic. available at <https://books.google.co.in/books?id=SFtItAEACAAJ>
- Mondal, D., & Raychoudhury, N. (2018). Foreign authorship collaboration in Indian LIS journals. *COLLNET Journal of Scientometrics and Information Management*, 12(1), 1–14. <https://doi.org/10.1080/09737766.2017.1332608>
- Pathak, M., & Bharati, K. A. (2018). *Growing visibility and impact of Indian Journal of Traditional Knowledge*. 17(3), 407–413. <http://nopr.niscair.res.in/handle/123456789/44596>
- Pradhan, S. S. (2020). Scientometric analysis of Annals of Library and Information Studies (ALIS). *International Journal of Science and Research*, 9(1), 361–366. <https://doi.org/10.21275/ART20203881>
- Saberi, M. K., Barkhan, S., & Hamzehei, R. (2019). A bibliometric study and visualization of Library Philosophy and Practice during 1998-2018. *Library Philosophy*

and Practice (e-Journal), 19. <https://digitalcommons.unl.edu/libphilprac/2565>

- Shivakumaraswamy, K. N., & Muthuraj, T. N. (2017). Indian Journal of Traditional Knowledge: A scientometric study (2002-2012). *International Journal of Information Dissemination and Technology*, 7(3), 182–186.
<https://doi.org/10.5958/2249-5576.2017.00020.6>
- Subramanyam, K. (1983). Bibliometric studies of research collaboration: A review. *Journal of Information Science*, 6(1), 33–38.
<https://doi.org/10.1177/016555158300600105>
- <http://nopr.niscair.res.in>
- <https://scholar.google.com>
- <https://www.researchgate.net>
- <https://www.scimagojr.com>
- <https://www.wipo.int/tk/en/tk>
