

SYSTEMATIC REVIEW OF LIBRARY AND INFORMATION SCIENCE RESEARCH IN SAARC COUNTRIES

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Abstract

This study provides a systematic review of library and information science research in SAARC countries. The data were taken from the Scopus database for the period 2002-2021. A total of 1183 records were found in this study. VOSviewer software was then used to visualize the data. The results show that the growth rate of publications is very constant. The most prolific author was Ameen, K., who produced 26 articles and 158 citations. Furthermore, India was the leading country for LIS research in SAARC countries, with 863 documents, whereas Library Philosophy and Practice was the most favored source, with 301 documents. This study can be useful in identifying trends in library and information research in SAARC countries.

Keywords: Systematic Review, Bibliometrics, SAARC countries, LIS, VOSviewer

Introduction

Social progress depends on scientific research and its dissemination. The most important phenomenon that is exploding in developed countries is the creation of scientific research. Developing countries are also trying to do a lot of scientific research to solve current problems. Production and scientific research are now one of the main factors that determine competitiveness in all areas of development of the country. The aim of Library and Information Science (LIS) is to provide this type of research and to disseminate its results to the general public. The field of LIS, like other disciplines, is very important for the growth of a nation, and research in LIS is very important for social and scientific development. One of the key indicators for evaluating the effectiveness and impact of

research is to measure the results of the research to create, develop or implement better and more effective science policy. There has been a noticeable increase in the number of publications over the last 20 years. Therefore, the status of library and information science (LIS) research in SAARC countries was assessed using the bibliometric technique.

In the field of library and information science, bibliometrics is an important area of study (Rawat et al., 2021; Tella & Aisha Olabooye, 2014). Pritchard first used the word “bibliometrics” to refer to a statistical method of valuing all areas of knowledge in 1969 (Patel et al., 2021a; Pritchard, 1969). According to the literature review, SAARC countries have very few bibliometric studies on LIS research. Using information from the LISA (Library and Information Science Abstracts) database, Patra and Chand (2009) compared the results of LIS research in SAARC and ASEAN member countries. This study focused on the author model, top journals, the growth model in the body of literature and research trends, and found that SAARC countries are superior to ASEAN countries. Using the Science Citation Index, Gupta et al. (2004) examined the scientific and technological cooperation of South Asian countries as a whole. The results showed that other South Asian countries and India had relatively stronger cooperative ties. Viswanathan et al. (1991) examined the growth and current state of libraries and information networks in the South Asian region. All of these studies did not analyze the results of LIS studies in SAARC countries over the past 20 years. Therefore, this study aims to provide a documentary evaluation of the results of LIS research in the SAARC countries in the period 2002-2021 based on the Scopus database.

About SAARC Countries

The SAARC Charter was ratified in Dhaka on December 8, 1985, and the South Asian Association for Regional Cooperation (SAARC) was established. The eight countries of SAARC are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. On January 17, 1987, the secretariat of the association was established in Kathmandu. In 2007, Afghanistan became a member of SAARC. SAARC is a group of people from a few South Asian nations who came together to work for improved living conditions, faster economic growth and prosperity, and to promote active cooperation and reciprocated assistance in the fields of culture, technology and science (Hugar & Kannappanavar, 2020; Rekha & Kumar, 2019).

Objectives

The main objectives of this study are:

- To examine the year-wise growth rate of documents on LIS literature published in SAARC countries during 2002-2021;
- To identify the most prolific authors of LIS research in SAARC countries;
- To examine the research output of SAARC countries;

- To find out the most preferred sources of LIS research by SAARC countries; and
- To study the visualization of co-occurrence of keywords in publications of SAARC countries.

Methodology

Data Source

The Scopus database developed by Elsevier was used for conducting the bibliometric study on Library and Information Science Research in SAARC Countries for the period 2002-2021. Scopus is one of the largest abstracts and citation database of peer-reviewed literature. It covers scientific journals, peer reviewed literature, books, conference proceedings, etc.

Search Strategy

Library and Information Science research data of the SAARC countries for the last 20 years i.e. 2002-2021 was sourced from the Scopus database. The search string used was "(TITLE-ABS-KEY (library AND information AND science) AND (LIMIT-TO (AFFILCOUNTRY, "India") OR LIMIT-TO (AFFILCOUNTRY, "Pakistan") OR LIMIT-TO (AFFILCOUNTRY, "Bangladesh") OR LIMIT-TO (AFFILCOUNTRY, "Sri Lanka") OR LIMIT-TO (AFFILCOUNTRY, "Nepal") OR LIMIT-TO (AFFILCOUNTRY, "Afghanistan") OR LIMIT-TO (AFFILCOUNTRY, "Bhutan") OR LIMIT-TO (AFFILCOUNTRY, "Maldives"))) AND (LIMIT-TO (PUBYEAR, 2021) OR.....OR LIMIT-TO (PUBYEAR, 2002))". A total of 1183 records were retrieved from the Scopus database on July 5, 2022.

Data Analysis and Visualization

After examination of the raw data, MS-Excel was used for statistical analysis and graphic presentation. VOSviewer was used for network data visualization to produce accurate results. The researchers applied various indicators such as year-wise growth rate of documents, most prolific author, the research output of SAARC countries, highly preferred sources and visualization of the co-occurrence of keywords. VOSviewer software was selected for the quality of graphical representations and it reflects the whole picture of LIS research publications from SAARC countries.

Data Analysis and Interpretation

Year-wise Growth Rate of Documents: Based on the Scopus database, 1183 LIS research publications from SAARC countries were analyzed for the period from 2002 to 2021. The majority of documents were journal articles, followed by reviews, conference

papers, book chapters, books, brief surveys and editorials. A significant proportion of the documents (858) were published as journal articles, representing 72.53 % of all publications, followed by 147 documents (12.43 %) that were published as reviews. For each document, there were an average of 8.05 citations. Figure 1 shows the growth of articles published in library and information science and includes an exponential trend line showing the R^2 value in the figure. The R^2 value, which is about equal to 1 (i.e., $R^2 \approx 1$), indicates that the growth of literature was quite consistent throughout the study period. The study's initial years covered very few publications, but starting in 2013, there were more than 50 documents published each year. Since 2017, there had been a steady rise in the number of publications, which reached a three-digit level (120) by 2019 and peaked in 2021 at 231 publications.

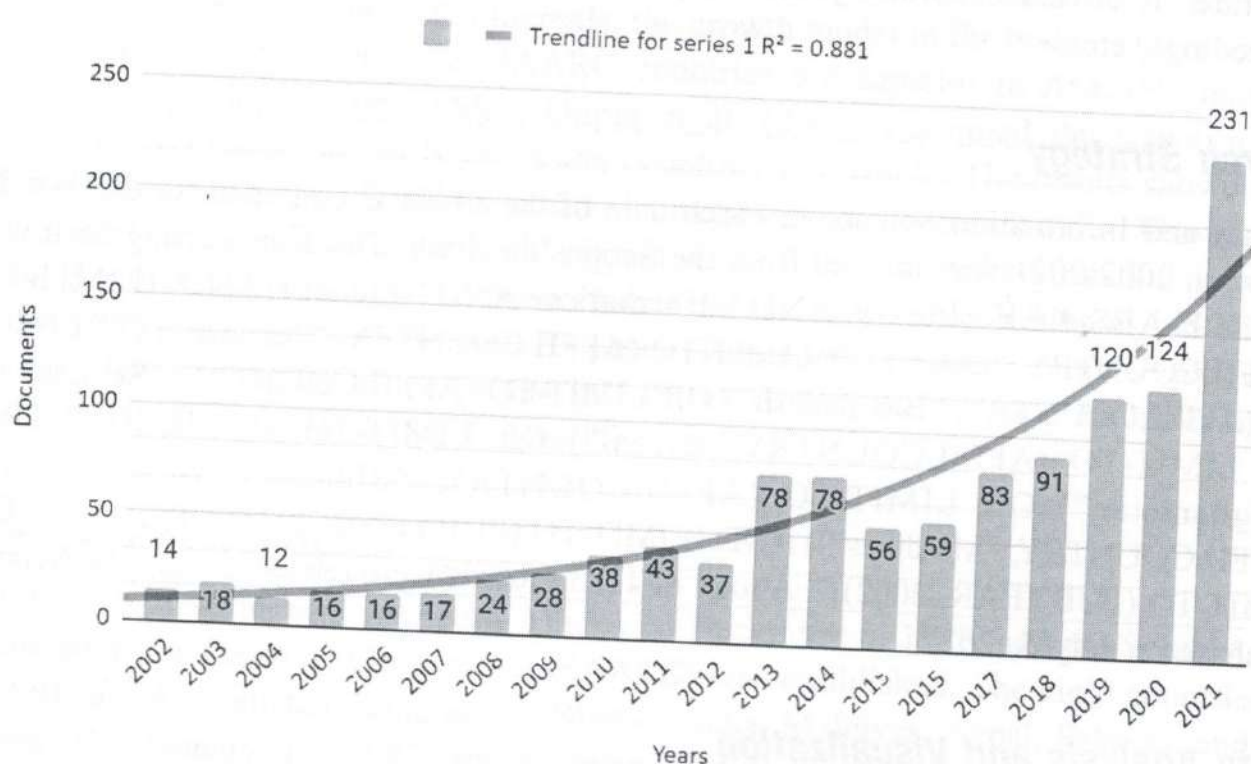


Figure 1: Year-wise Growth of Documents

Most Prolific Author

In SAARC countries, 1891 authors were identified in library and information science research. Using the VOSviewer mapping software, only 36 of these authors published at least six library and information science papers during the study period (2002-2021). Figure 2 shows the density visualization of the most prolific authors. The number of documents is indicated by the yellow circle on this map. In other words, the more documents an author has, the more yellow circle there will be. As per the density map, Ameen, K. (26 documents and 158 citations), Mahmood, K. (25 documents and 233 citations), Kumar, A. (18 documents and 49 citations), Warraich, N.F. (14 documents and 154 citations), Kumar, S. (14 documents and 87 citations), and Bhatti, R. (13 documents and 136 citations) were the authors who produced the most work.

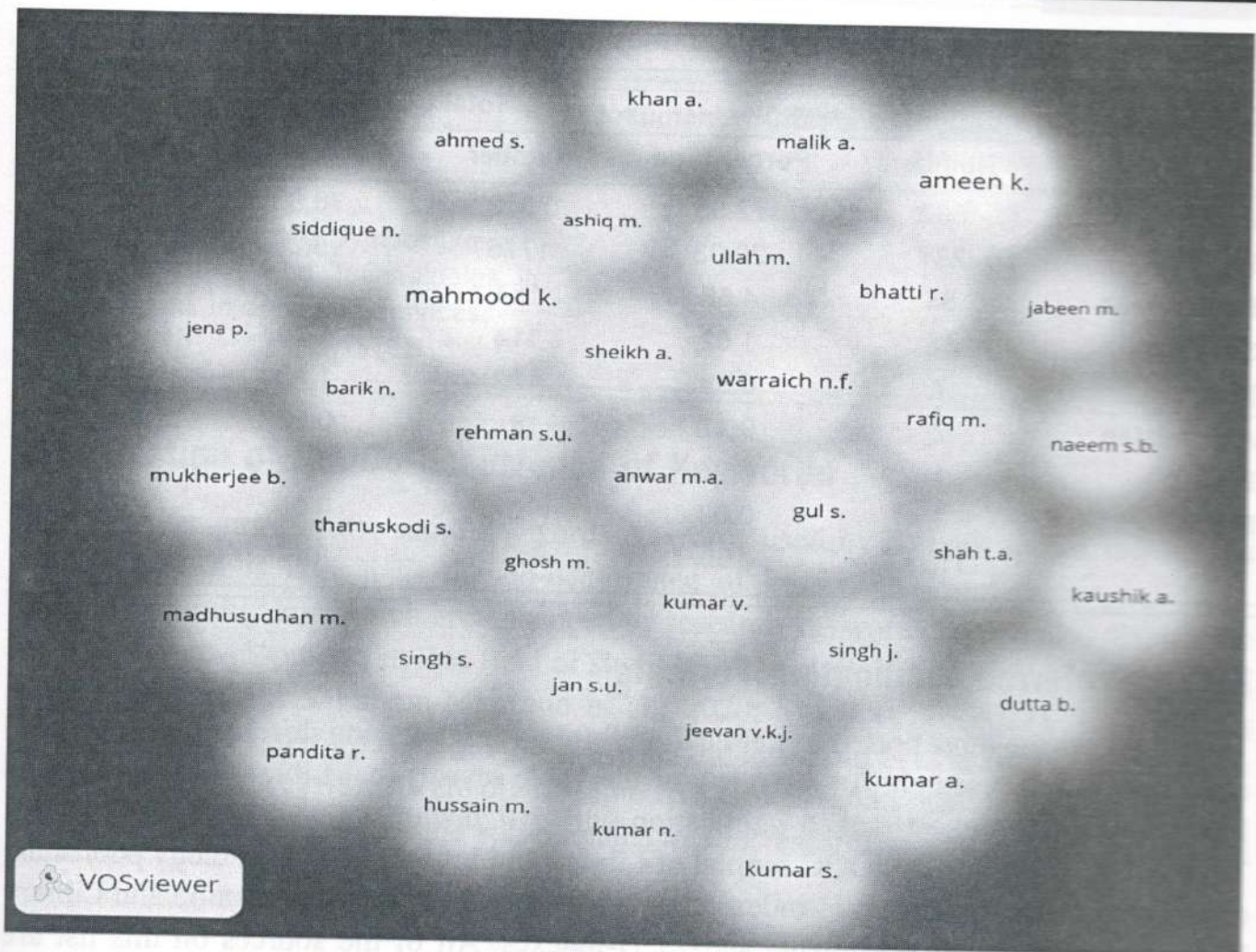


Figure 2: Density Visualization of the Most Prolific Authors

Research Output of SAARC Countries

Table 1 shows the total number of articles (research output) published by the SAARC countries in the LIS field from 2002 to 2021. It indicates that India contributed the most to LIS research among SAARC countries, with a share of 72.95%. The remaining SAARC countries contributed a total of 27.05% and out of these, Pakistan had the largest contribution (20.03%). Surprisingly, research output of 50% of the SAARC countries (Nepal, Afghanistan, Bhutan and Maldives) could not reach double-digits in 20 years of study. Four SAARC countries (India, Pakistan, Bangladesh and Sri Lanka) produced more than 99% of the research documents. In contrast to India and Pakistan, Bangladesh and Sri Lanka did not perform satisfactorily in LIS research. Additionally, Table 1 also presents citations related to data from SAARC countries in LIS research. All the documents under study received a total of 9519 citations at an average of 8.05 citations per document. Articles published by India obtained the highest citations (76.83% of SAARC countries' total citations), followed by articles from Pakistan (18.66%). Citations per document have also been determined for each country. Nepal had the greatest ratio of citations per document (17.42), followed by India (8.47) and Pakistan (7.49).

Table 1: Research Output of SAARC Countries (2002-2021)

Country	Total Documents		Total Citations		Citations per Documents
	Number	Percentage	Number	Percentage	
India	863	72.95	7313	76.83	8.47
Pakistan	237	20.03	1776	18.66	7.49
Bangladesh	54	4.56	184	1.93	3.41
Sri Lanka	18	1.52	114	1.18	6.33
Nepal	7	0.59	122	1.28	17.42
Afghanistan	2	0.17	8	0.08	4.00
Bhutan	1	0.08	2	0.02	2.00
Maldives	1	0.08	0	0.00	0.00
Total	1183	100	9519	100	

Highly Preferred Publication Formats

Table 2 shows the most preferred publication format for publishing documents by SAARC countries on LIS research. An overview of the Table reveals that Library Philosophy and Practice was the highest-ranked publication with 301 documents and an H-index of 24. This was followed by DESIDOC Journal of Library and Information Technology publishing 65 documents and having an H-index of 16, and the International Information and Library Review, which has 43 documents and 27 H-indexes. All of the sources on this list are from reputable publishing houses with a long and rich history around the world, and they are all peer-reviewed, reliable, and time-tested sources. From the citations obtained from the documents published in these sources, the conclusion is credible and the quality of the sources is universally accepted.

Table 2: Highly Preferred Publication Formats

Source	Documents	Citations	Citations per Documents	H-index
Library Philosophy and Practice	301	462	1.53	24
DESIDOC Journal of Library and Information Technology	65	291	4.48	16
International Information and Library Review	43	303	7.05	27
Annals of Library and Information Studies	33	148	4.48	15
Library Review	25	288	11.52	0
Library Hi Tech News	22	123	5.59	20
Global Knowledge, Memory, and Communication	18	60	3.33	33
Malaysian Journal of Library and Information Science	13	89	6.85	26

[Table Contd.]

158 items consisting of India (93 occurrences), Pakistan (78) and Library and Information Science (69). Cluster 2 (green) has 62 items, namely Human (110), Review (73) and Systematic Review (48). Cluster 3 (blue) has 42 items, which consist of Non-humans (27), Unclassified drugs (20), and Phytochemistry (18). Cluster 4 (yellow) has 29 items consisting of Priority Journals (42), Animals (15) and Chemistry (15). Finally, cluster 5 (purple) has 8 items, which consist of Library (21), Librarianship (13), and Asia (10).

Conclusion

The field of Library and Information Science (LIS) is relatively new as compared to other traditional fields. Researchers around the world are working on LIS research. South Asia lag far behind in LIS research. This study examines the research output of LIS over the past 20 years i.e. 2002-2021 in SAARC countries. The results of the study revealed that publication growth is quite consistent during the period under study, with 59 publications per year along with 8 citations per publication. The highest number of publications were produced during 2021. Ameen, K. is an outstanding author with 26 documents and 158 citations. India dominated LIS research among SAARC countries, followed by Pakistan and Bangladesh. The remaining SAARC countries must strengthen their research in the field of LIS. Library Philosophy and Practice is the most popular publication among the library and information science researchers. This study encourages LIS researchers from SAARC to devote more time and efforts to their field of research. This study may also be useful in identifying trends in library and information research in SAARC countries.

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