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Research on Library and Information Science Services by Pakistani Authors from 2011 to 2020

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Abstract

The main objective of the current study is to quantify the research productivity in Library and Information Science (LIS) Services produced by Pakistani authors during the period of ten years from 2011 to 2020. The retrospective research method by applying the bibliometric technique has been used. The data of the publications on LIS Services by Pakistani authors has been browsed from various online and print sources. The selected bibliographic parameters of publications were inserted in Microsoft Excel-2016 for data analysis. The findings have been presented in tabular and graphic formats. A total of 1,258 documents were identified, contributed by 3,110 authors including multiple counts with an average of 2.47 authors per document. As a distinct name, a total of 858 authors were recognized and the share of international authors was slightly more than one-fifth (21%). About one-third of the total documents were published in the last two years of the study. Eighty-three percent of the documents were the results of research collaboration and the two-author pattern was found the preferred authorship pattern. The majority of documents (91%) were published as journals articles, followed by conference papers, book chapters and books. The highest number of papers were published in *Pakistan Library and Information Science Journal*, followed by *Library Philosophy and Practice (e-journal)*. Sixty-four percent of the authors contributed in one paper each while 69 authors contributed ten or more than ten papers each. Dr. Rubina Bhatti, Dr. Kanwal Ameen and Dr. Khalid Mahmood were found the top-three most productive authors with 103, 94 and 77 publications, respectively. The introduction of LIS doctorate programs and the establishment of the National Digital Library of Higher Education Commission put a healthy impact on the growth of publications. There is a need to inspire the practicing librarians that they should come forward to contribute to the research progress to develop LIS services.

Keywords: Library and Information Science Services, Pakistan, Research Productivity, Bibliometrics

Introduction

The effective higher education system plays a significant role to stimulate the power of critical thinking and research, which are considered a backbone for the socio-economic sustainable development of the country. The quality education from grass-root to a higher level and innovative research activities are considered pertinent pillars to establish the knowledge-based society (Iqbal et al. 2018; Meo et al. 2013; Tanveer & Karim 2018; Tanveer & Karim 2019). The growth of

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publications in every discipline of knowledge has been amplified in manifold during the last two decades (Haq 2021; Sun & Yuan 2020). The different studies on the research growth of Pakistan also endorsed the growing trend of publication in every branch of knowledge and the findings of these studies support the policy-makers in strategic decision-making (Siddique et al. 2021; Haq 2020; Ahmad et al. 2020).

The research assessment is one of the important indicators to gauge the standard and quality of higher education. For this purpose, a bibliometric method has been frequently applied for research evaluation (Abramo & D'Angelo 2011). The appraisal of publications in any specific subject area help to understand the development and worth of this subject in the particular society (Warriach & Ahmad 2011). Alan Prichard introduced the term bibliometric in 1969 to examine the different attributes of publications by using statistics and mathematics, earlier this technique was known as statistical bibliography (Prichard 1969). The outcomes of bibliometric studies provide the periodic growth of publications, research trends, authorship and collaboration pattern, preferred sources of publications, citation impact, productive authors, institutions and countries (Alhibshi et al. 2020; Tanveer et al. 2022). Young and emerging researchers used the findings of these studies for the selection of research topics, similarly the library committee reviewed the bibliometric studies of journals for the selection of journals for the library (Kevin et al. 2009).

Pakistan is a developing nation, having the 5th largest population on the planet with 224 universities having 1.9 million enrolments. Due to coronavirus pandemic and financial restrains, the Government of Pakistan reduced the educational expenditure from 2.3% in 2018-19 to 1.5% of G.D.P in 2019-2020 (Pakistan 2020).

To review the status of Pakistan in LIS research at the global level, an open-accessed portal Scimago Journal and Country Rank (SJR) was consulted, which showed that a total of 216,072 papers were published on LIS worldwide from 1996 to 2020. The authors affiliated to the United States contributed more than one-third (n=74,779; 34.60%) of the total research, followed by United Kingdom (n=17,453; 8.07%) and China (n=12,426; 5.75%). Pakistani authors contributed 951 (0.44%) papers in SJR indexed journals and stood in 38th position out of 191 countries. The dataset of 2020 revealed that a total of 17,000 papers were published by the whole world on LIS and Pakistani authors contributed 200 (1.17%) papers and reached on 21st position (SCImago, 2021).

There are no authentic statistics regarding the total number of libraries and librarians in Pakistan but the President of Pakistan Library Association stated that there were more than 10,000 LIS professionals and about 8,000 libraries in Pakistan in 2016 (Shah 2016). Now thirteen universities, ten in the public and three in the private sectors are offering the LIS courses in Pakistan (Hussain et al. 2018), and seven LIS journals are also being published from Pakistan (Hussain & Jan 2021). The aim of the present study is to assess the growth and bibliometric attributes of publications on LIS services by Pakistani authors published from 2011-2020.

Literature Review

The number of research studies focused on the overall research growth of Pakistan. Bashir (2013) reported that a total of 38,274 papers were produced by Pakistan from 1996-2010, it is counted as 0.32% of the global knowledge and 31% of the papers were produced with international research collaboration. The study also exposed that the United States contributed the highest number of papers (23%). Iqbal et al. (2018) assess the research visibility of Pakistan from 1981 to 2015 as indexed in the Web of Science database. Out of the total 74,755 papers, 36% (n=27,299) of the

papers were the result of international research collaboration while 6.78% (n=5,072) of the research was produced by a single author pattern. The study also proved that 79% of the research was produced during the last ten years of study from 2006 to 2015. Chemistry was found the most preferred area of research. Haq and Faridi (2021) examined the research growth of Pakistan from 2000 to 2019. COMSATS University was found the most productive and Medicine was found the preferred area of research. Javed et al. (2020) analyzed the ten-year research growth of 17 higher education institutions of Islamabad. Different studies focused on the research growth of specific universities and institutions of Pakistan (Ahmad et al. 2020; Haq et al. 2020; Haq 2021a; Shahzad et al. 2021).

The first prominent study on the assessment of LIS research in Pakistan was published in 1996. This study focused on the LIS literature of Pakistan published in international journals from 1947 to 1995 and 97 papers were identified. The majority of the papers (92.47%) were written by a single author pattern and among the top six authors, five were faculty members. All these papers were published in 52 journals and the highest number of papers were published in *International Information and Library Review*. The study suggested establishing National Research Council for Librarianship to carry out research on the burning issues of Pakistan librarianship (Mahmood 1996). In response to this study, Anwar and Saeed (1999) conducted a comprehensive study on LIS research in Pakistan published from 1969 to 1995 by including all literature indexed in the LISA-PLUS database and analyzed the 251 documents produced by 64 authors. More than half (57%) of the literature was published in one journal, *Pakistan Library Bulletin* (Later renamed as *Pakistan Library and Information Science Journal (PLISJ)*).

Khurshid (2013) examined 516 papers contributed by Pakistani authors in international journals from 1957 to 2011. Non-Resident Pakistani authors contributed 47% (n=244) of the papers and *library education* was found the preferred area of research. More than two-thirds (71%) of the papers were written by the faculty members and Dr. Khalid Mahmood was found a most prolific author, followed by Shaheen Majid, Sajjad ur Rehman and Syed Jalaluddin Haider. Naseer and Mahmood (2014) examined 5,195 documents produced by Pakistani LIS authors during 62 years from 1947 to 2008. More than one-fourth (n=1388; 26.72%) of the literature was published on the sub-category of “*Information Treatment for Information Services*”. Ahmad and Warriach (2013) scrutinized the LIS Research trends in Pakistan from 2007 to 2012. Two-thirds of the total research was published in international journals and the authors affiliated with the University of the Punjab contributed the maximum number of papers.

Siddique et al. (2021) measured the LIS research growth of Pakistan from 1957 to 2018. A total of 1305 papers were identified and University of the Punjab contributed 381 papers followed by University of Karachi (n=175) and Islamia University of Bahawalpur (n=152). About two-fifth (n=514; 39.38%) of the papers were published in two locally published journals, *PLISJ* and *Pakistan Journal of Information Management and Libraries (PJIM&Ls)*.

Two recent studies assessed the research output by Pakistani LIS authors in 2019 and 2020. A total of 154 papers were produced in 2019 and about two-thirds (63%) were published in international journals. Two hundred and forty-six papers were published in 2020, University of Sargodha contributed the highest number of documents and 100 papers were published in *Library Philosophy and Practice* (Haq & Satti 2021; Haq 2021).

Research Methodology

A retrospective bibliometric research method was applied to retrieve the detail of publications on LIS services contributed by Pakistani authors during the period of ten years from 2011 to 2020. The targeted data was browsed from various online databases and printed sources with the criteria of inclusion that at least one author's affiliated to Pakistan or belonged to Pakistan in the case of non-resident Pakistani LIS authors. Some papers contributed by Non-LIS Pakistani authors on LIS services in Pakistan have also been included.

In the exclusion criteria, all the papers published in newspapers, written in non-English languages and contributions of foreign LIS authors in the local LIS journals have not been included. Similarly, articles in press (ahead to print) and unpublished theses and conference papers were also not excluded in the analysis.

The authors of the current study tried hard to cover the maximum documents published in the targeted period on Pakistani LIS services, even then it might be a chance that some paper(s) have been missed or overlooked. This study does not claim to present a complete picture but portrays a big snapshot of LIS services in Pakistan from 2011 to 2020.

Research Objectives

The study was conducted to fulfill the following objectives: -

1. To review the growth of literature produced by Pakistani authors on LIS services in chronological order with annual growth rate
2. To analyze the authorship pattern of documents
3. To examined the preferred sources/journals
4. To highlight the productive authors, their affiliation and contribution.

Results

Table 1 indicated the chronological growth of documents, a total of 1,258 documents were found on LIS services contribution by Pakistani authors from 2011 to 2020 with an average of 125.80 documents per year. A growing trend of documents was found except the years 2014 & 2018, and an overall average annual growth was recorded 17.86. About one-third of the publications (n=405; 32.19%) were produced during the last two years of study (2019-2020). All these documents were contributed by 3,110 authors including multiple counts with an average of 2.47 authors per document. The collaboration pattern was increased from 2.23 authors to 2.70 authors per document over the years.

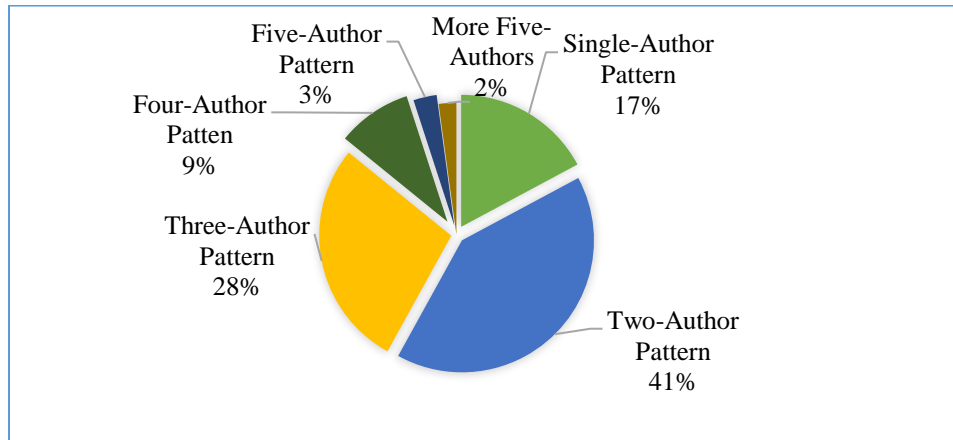
Figure 1 illustrated that 83% (n=1,042) of the documents were the result of research collaboration of two or more than two authors, only 17% (n=216) of the documents were written by a single author pattern. Slightly more than 40% of the documents (n=514; 40.86%) were contributed by the two-author pattern, followed by three author pattern (n=350; 27.82%). Only 63 documents were written by five or more than five author patterns.

Table 1; Distribution of publications by year (n=1,258)

Year	Total Publications	Percentage	Annual Growth Rate	Total Authors	Average Authors Per Publication
2011	66	5.25		147	2.23
2012	84	6.68	27.27	187	2.23
2013	111	8.82	32.14	249	2.24
2014	109	8.66	-1.80	267	2.45
2015	106	8.43	-2.75	251	2.37
2016	117	9.30	10.38	280	2.39
2017	136	10.81	16.24	335	2.46
2018	124	9.86	-8.82	291	2.35
2019	153	12.16	23.39	422	2.76
2020	252	20.03	64.71	681	2.70
Total	1,258		17.86*	3110	2.47**

* Average Annual Growth Rate; ** Average Authors per Publications

Figure 1, Authorship patterns of publications



The analysis of document’s type showed that a majority of documents (n=1,143; 90.86%) were published in 234 journals, followed by published conference papers (n=67; 5.33%), book chapters (n=35; 2.78%) and books (n=13; 1.03%).

There were 150 journals with one publication each while 84 journals have published two or more than two publications each. Table 2 presented the detail of the frequently used 17 journals that published ten or more than ten publications. About 61% (n=764) of the total documents were published in these journals. The highest number of papers (n=262; 20.86%) were published in *PLISJ*. This journal has been published by the Library Promotion Bureau-Karachi under the editorship of Dr. Ghaniul Akram Sabzwari since 1966. The second most preferred source of publication with 214 papers (17%) was the *Library Philosophy and Practice (e-journal)*, this journal has been published online by University of Nebraska, United States. A LIS journal, *PJIM&Ls* being published from the Institute of Information Management, University of the Punjab secured the 3rd rank with 78 papers. Out of 17 journals mentioned in Table 2, seven journals are being published from Pakistan while ten journals have been published internationally.

Table 2, Frequently used sources of publications/journals

Serial No.	Name of Journals	Total Publications
1.	Pakistan Library & Information Science Journal	262
2.	Library Philosophy and Practice (e-journal)	214
3.	Pakistan Journal of Information Management & Libraries (earlier known as Pakistan Journal of Library and Information Science)	78
4.	The Electronic Library	22
5.	Malaysian Journal of Library & Information Science	18
6.	Library Review	17
7.	Pakistan Library Association Journal	17
8.	PUTAJ - Humanities and Social Science	17
9.	International Journal of Librarianship and Information Science (JJoLIS)	16
10.	Journal of Information Management and Library Studies (JIMLS)	16
11.	Chinese Librarianship: an International Electronic Journal	14
12.	Global Knowledge, Memory and Communication	14
13.	Libri: International Journal of Libraries and Information Studies	14
14.	International Journal of Information Management Science (IJIMS)	12
15.	Library Hi Tech News	12
16.	Library Management	11
17.	Scientometrics	10

As for as individual authors are concerned, a total of 858 authors have been identified. Among them, 21% (n=179) of the international authors, collaborated with Pakistani LIS authors, mostly with non-resident Pakistani authors. About one-third of the total authors, (n=547; 64%) have contributed in one paper each, while 102, 33 and 43 authors contributed in two, three and four papers, respectively. Only 69 authors contributed ten or more than ten papers each. The highest number of publications (n=103) was contributed by Prof. Dr. Rubina Bhatti, who is serving as Dean, Faculty of Social Sciences, and Chairperson of Department of Library and Information Science, Islamia University of Bahawalpur. She obtained her Ph.D. from the University of Manchester, United Kingdom in 2003.

Prof. Dr. Kanwal Ameen produced the second-highest number of publications (n=94), presently she is serving as Vice-Chancellor at the University of Home Economics, Lahore. Earlier she served as Chairperson, Department of Information Management for ten years (2009-2018) and also served as Director, Directorate of External Linkage at the University of the Punjab. She attained her Ph.D. from University of the Punjab in 2005.

Prof. Dr. Khalid Mahmood produced 77 publications during the targeted period. Presently, he is serving as Dean, Faculty of Information and Media Studies at University of the Punjab. He completed his Post-Doctoral Fellowship from the University of California - Los Angeles (UCLC),

United States during 2010-11. He is the only researcher in the field of LIS in Pakistan who reached among the galaxy of the top 2% scientists of the world (Ioannidis et al. 2020).

Dr. Shaheen Majid contributed 55 publications during the period of ten years. He got retirement as Associate Professor from the Nanyang Technological University-Singapore in 2020 but he is still serving there as teaching faculty on a contract basis. He obtained his Master's degree in Library Science from the University of the Punjab in 1974-76 and Ph.D. in Information Science from City University London during 1994-2000. He also served in International Islamic University Malaysia for eight years (1992-2000), before joining Nanyang Technological University-Singapore in 2000.

The other productive authors along with their affiliation and the total number of publications are shown in Table-3.

Table 3, Productive authors with ≥ 20 publications

Rank	Author's Name and Affiliation	Total Documents
1.	Rubian Bhatti ; Islamia University of Bahawalpur	103
2.	Kanwal Ameen ; University of the Punjab-Lahore and University of Home Economics-Lahore	94
3.	Khalid Mahmood ; University of the Punjab-Lahore and Imam Abdul Rahman bin Faisal University-Saudi Arabia	77
4.	Shaheen Majid ; Nanyang Technological University-Singapore	55
5.	Nosheen Fatima Wairrach ; University of the Punjab-Lahore	48
6.	Mumtaz Ali Anwar ; University of the Punjab-Lahore	45
7.	Haroon Idrees ; University of Sargodha-Sargodha	44
7.	Saeed Ullah Jan ; Khushall Khan Khattak University-Karak	44
8.	Muhammad Asif Naveed ; University of Sargodha-Sargodha and University of the Punjab-Lahore	40
8.	Salman Bin Naeem ; Islamia University of Bahawalpur, Children Hospital and Institute of Child Health-Multan	40
8.	Ikram Ul Haq ; King Saud bin Abdulaziz University for Health Sciences-Saudi Arabia	40
9.	Zameer Hussain Baladi ; King Saud bin Abdulaziz University for Health Sciences-Saudi Arabia	37
10.	Muhammad Rafiq ; University of the Punjab-Lahore	35
11.	Shafiq ur Rahman ; University of the Punjab-Lahore and Imam Abdul Rahman bin Faisal University-Saudi Arabia	34
12.	Shamshad Ahmad ; University of Sargodha-Sargodha and Islamia University of Bahawalpur	31
13.	Shakeel Ahmad Khan ; Islamia University of Bahawalpur and Government College University-Lahore	29
15.	Sajjad Ahmad ; University of Peshawar, and University of the Punjab-Lahore	27
16.	Amjid Khan ; University of Peshawar, Islamia University of Bahawalpur and Allama Iqbal Open University-Islamabad	26
16.	Asad Khan ; University of Peshawar	26
17.	Ghalib Khan ; Khushall Khan Khattak University-Karak and Islamia University of Bahawalpur	25

17.	Syeda Hina Batool ; University of the Punjab-Lahore	25
17.	Muhammad Shahid Soroya ; Punjab Higher Education Commission-Lahore, Now Independent researcher-United States	25
18.	Saira Hanif Soroya ; University of the Punjab-Lahore	24
19.	Farzana Shafique ; University of the Punjab-Lahore, Islamia University of Bahawalpur and Imam Abdur Rahman bin Faisal University-Saudi Arabia	23
20.	Muhammad Yousuf Ali ; Aga Khan University, Islamia University of Bahawalpur	22
22.	Abid Hussain ; Elementary and Secondary Education-KPK, Allama Iqbal Open University-Islamabad	21
21.	Midrar Ullah ; National University of Sciences and Technology-Islamabad, University of the Punjab-Lahore	20
21.	Muzammil Tahira ; University of Education-Lahore, University of Technology-Malaysia	20
21.	Shehzad Ahmad ; Edward College-Peshawar, University of the Punjab-Lahore	20

Discussion

The history of modern research in LIS services in Pakistan was started with the arrival of Asa Don Dickenson, an American Librarian and Teacher at the University of the Punjab, Lahore in 1915. He had re-organized the collection and services of the university library and taught the modern methods of library science to the local librarians. During his tenure, he also wrote a textbook “Punjab Library Premier” and laid the foundation of modern writing in LIS services in the area, now located in Pakistan. University of the Punjab was the only university offering LIS education in Pakistan at the time of independence and its LIS course was suspended till 1951. University of Karachi started postgraduate diploma course in 1956 later on University of Peshawar (1962), University of Sindh (1970), University of Balochistan (1981), and Islamia University of Bahawalpur (1982) commenced the LIS programs (Haider & Mahmood 2007; Hussain & Ansari 2021; Samdani & Bhatti 2011).

The bibliometric method has extensively been used to examine the pattern and growth of publications and LIS professionals have been very active in these studies. The findings of these studies are very useful for different purposes (Naseer & Mahmood 2009a; Haq & Alfouzan 2019). Nowadays, universities’ and authors’ ranking agencies follow the bibliometric statistics generated by the Web of Science and Scopus database. These two databases provide comprehensive coverage of literature as compared to other databases (Alhibshi et al. 2020; Ahmad et al. 2019).

Anwar and Saeed (1999) described that Pakistani LIS authors contributed 251 papers in 27 years from 1969 to 1995 with an average of 9.29 papers per year. In the same vine, Siddiqui et al. (2021) evaluated the LIS growth in Pakistan from 1957 to 2018 and stated that 615 papers were found from 1957 to 2009 with an average of about 12 papers per year.

The publications scenario was improved dramatically after the restructuring of the University Grant Commission as Higher Education Commission of Pakistan in 2002. A number of new universities were established and they started M.Phil. and Ph.D. programs. Presently 13 universities are offering LIS courses in Pakistan (Hussain et al. 2018). Siddique et al. (2021), exposed that although there was a low LIS research productivity from 1957 to 2009 but remarkable progress was found (n=690; 59%) from 2010 to 2018 with an average of 76.66 papers per year. Haq (2021) exposed that 246

papers were published on LIS services by Pakistani authors during the year 2020 and the highest number of papers were written on the subject area of *bibliometric*.

The present study disclosed that 1,258 documents, including journal articles, conference papers, book chapters and books, were contributed by Pakistani authors on LIS services with an average annual growth rate of 17.86 and 2.47 authors per document. The maximum number of documents (83%) were written by multi-author pattern whereas 17% of the papers were written by a single authors pattern. Previous studies endorsed that the ratio of a single-author patterns was on the higher scale as compared to collaborative research (Mahmood 1996; Haq & Alfouzan 2019).

The highest number of papers (n=262; 20.82%) were published in *PLISJ* in the current study, followed by *LPP* (n=214; 17%) and *PJIM&Ls* (n=78; 6.20%). Anwar and Saeed (1999) and Siddique et al. (2021) also confirmed that *PLISJ* has been the top preference for the Pakistani LIS community. *PLISJ* started its publication in 1966 and it has been published on a quarterly basis. Three different bibliometric studies were performed on the *PLISJ* and these studies highlighted the various attributes of publications (Khan & Samdani 1997; Naseer & Mahmood 2009; Haq & Alfouzan 2019). *PJIM&Ls* is the official journal of Institute of Information Management University of the Punjab, it was started in 1995 as a *Pakistani Librarian*, later it was renamed as *Pakistan Journal of Library and Information Science*. The department name had been renamed from Library and Information Science to Information Management, similarly, the journal's name was also modified. Warriach and Ahmed (2011) and Haq et al. (2021) evaluated the publication patterns and research trends of *PJIM&Ls*. *LPP* is an online, publicly accessed LIS journal published from the United States and accepted articles without publication charges so Pakistani authors contributed a handsome amount of papers in this journal. Anwar (2018) and Haq (2015) assessed the contribution of Pakistani authors in *LPP*. Siddique et al. (2021) quantified that about 32% (n=411) of the papers were published *PLISJ*, followed by *PJIM&Ls* (n=103) and *LPP* (n=93).

The authors affiliated with the University of the Punjab produced the maximum number of documents followed by Islamia University of Bahawalpur and University of Peshawar in the current study. The analysis of authors by gender shows the interesting fact that the top two most prolific authors are female, Prof. Dr. Rubina Bhatti and Prof. Dr. Kanwal Ameen. Out of top 30 authors, seven are female and 23 are male. Prof Dr. Khalid Mahmood stands on 3rd rank. Shaheen Majid of Nanyang Technological University-Singapore produced the highest number of papers as a non-resident Pakistan LIS author during the targeted period. Two other non-resident Pakistani authors, Ikram Ul Haq and Zameer Hussain Baladi of King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia also contributed significant literature. Similarly, two LIS researchers Dr. Asad Khan (University of Peshawar) and Dr. Muzammil Tahira (University of Education-Lahore) attained their doctorate from Malaysian universities so they collaborated with Malaysian LIS authors. Dr. Khalid Mahmood, Dr. Farzana Shafique and Dr. Shafiq ur Rehman served Imam Abdul Rahman bin Faisal University, Saudi Arabia and collaborated with international authors. Out of the top authors, the majority of authors are the faculty members in LIS department of different universities.

Non-resident Pakistani LIS professionals have been serving in different parts of the world and the majority of them have been serving or served in the Arab countries. Along with their professional responsibilities, they have been producing valuable research as Siddique et al. (2021a) examined the Scopus-indexed LIS research of the Arab World from 1957 to 2021. Among the top-10 most productive author, six including the top-5 authors belong to Pakistan. Sajjad ur Rehman contributed

the highest number of papers, followed by Zahiruddin Khurshid, Abdus Sattar Chaudhry, Shafiq ur Rehman, Ikram Ul Haq and Mumtaz Ali Anwar.

The present study is limited to published documents having online bibliographic details. It might be a chance that some documents published in print format have been missed or some online material may have also been overlooked. But the present data support understanding the research trends on LIS services in Pakistan.

Conclusion

Outstanding progress with growing trends has been explicit in the current analysis of research on LIS services in Pakistan from 2011 to 2020. The remarkable growth is the impact of doctorate programs and the accessibility of scholarly material through National Digital Library. A majority of the work was performed as research collaboration and less than one-fifth of the documents were produced by a single author. Overall, the male authors dominated but female authors also contributed a significant share. The majority of productive authors are faculty members and there is a need to aspire the practicing librarians to contribute to the research process. The findings of this study support to enhance the soft image of Pakistan librarianship at the national as well as international level.

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