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Research Productivity of the University of Jaffna (2010- 2024) after the Civil war of Sri Lanka: A Scientometric Analysis based on Web of Science database.

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Abstract

This study analyzes the research productivity of the University of Jaffna from 2010 to 2024, a period following the end of Sri Lanka's civil war. University of Jaffna was established in 1974 in the Northern region of Sri Lanka and experienced substantial disruptions due to the civil conflict that lasted from 1984 to 2009. Totally, number of 739 publications by the University of Jaffna was indexed with 15,946 Citations in the Web of Science database from 1989-2024. However, our analysis, focusing on post-war growth, covers 616 publications indexed in the Web of Science database from 2010–2024. Using HistCite, Biblioshiny, VOSviewer, and M.S.Excel, this scientometric study assesses key research indicators, including authorship patterns, yearly publication, citation metrics, keyword distributions, highly productive authors and international collaborations. In this study, findings show that the University of Jaffna produced 616 publications, garnering a total of 12,232 citations with an overall h-index of 46. Publication output peaked in 2022 with 85 records (14%), and engineering emerged as the most represented discipline with 105 publications (17%). The most productive author was *S. N. Surendran*, contributing 55 publications (9%), while *K. Vignarooban* recorded the highest citation impact with 2,495 citations (20%). The study summarizes that after the civil war of Sri Lanka, research productivity of University of Jaffna increased due to international collaborations and technological advancements. The findings offer valuable insights for governments, academic institutions, librarians, and researchers, contributing to an understanding of regional scholarly growth and supporting future academic planning and development.

Keywords: Civil war, Post-war, University of Jaffna, Research Productivity, Sri Lanka, Scientometric analysis

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Introduction

The Status of any University or Institution greatly depends on its research output and social impact. This study analysis the research productivity of University of Jaffna (UoJ) by using the Scientometic techniques. Scientometrics study refers to quantitative aspects of research. It is including the analysis of scientific literature, citations, collaboration pattern, publication pattern and the measurement of scientific productivity and impact. It facilitates the identification of trends in research, landmark publications, key contributors, institutional affiliations, and collaborative networks within a research field. (Tague, 1992).

The University of Jaffna is located in Jaffna peninsula, Northern region of Sri Lanka, it is established in 1974. It has eleven (11) faculties; Agriculture, Allied Health Science, Arts, Engineering, Graduate Studies, Hindu Studies, Management Studies & Commerce, Medicine, Science, Technology and Sir Ponnambalam Ramanathan Faculty of Performing & Visual Arts. University offers undergraduate and postgraduate degrees. It is the seventh largest University in Sri Lanka in student populations. (University of Jaffna, 2024).
The civil war in Sri Lanka lasted from 1983 to 2009 and officially ended in 2009. During this 26-year conflict, the Northern and Eastern regions of the country were more severely affected compared to other areas. As a result, both the infrastructure development and academic performance of the University of Jaffna were significantly impacted. According to the Web of Science database, the University of Jaffna has published a total of 739 publications from 1989 to 2024, receiving 15,946 citations with an H-index of 51. Notably, after the end of the civil war (2010 - 2024), the University produced 616 publications, which received 12,232 citations and attained an H-index of 46. In contrast, during the civil war period (1989 - 2009), only

123 publications were indexed, with 3,689 citations and an H-index of 29 over the span of 20 years.

Scientometric analysis is an essential method for quantitatively evaluating scientific research. It assesses research productivity, citation impact, and collaboration patterns among authors, institutions, and countries. This type of analysis supports informed decisions in research policy, funding allocation, and academic planning. It helps identify emerging research trends, influential publications, and key contributors across disciplines. Scientometric studies are also valuable for libraries in resource selection and collection development. By offering insights into the structure and dynamics of scientific knowledge, scientometric analysis enhances strategic planning and promotes academic excellence. It is widely used to evaluate the performance of institutions, researchers, and subject areas, often through bibliometric indicators such as publication counts, citation metrics, collaboration networks, and keyword trends. Moreover, scientometric analysis helps highlight the strengths and weaknesses of research output, guiding scholars toward more impactful contributions. Overall, it plays a critical role in managing and advancing scholarly communication.(Hood and Wilson, 2001).

Therefore, this study primarily analyzes the research productivity of the University of Jaffna after the Sri Lankan civil war in terms of authorship patterns, year-wise publication distribution, citation analysis, keyword analysis, and other relevant metrics. The analysis is based on data from the Web of Science database and employs scientometric techniques to provide a comprehensive evaluation of the University's research performance during the post-war period.

Objective of the research

- To analyses the research trend of the University of Jaffna after the civil war of Sri Lanka.
- To examine the most productive authors and citation impact in the period.
- To explore collaborative efforts with other institutions and countries.
- To analyze the keywords, major subject areas, and preferred journals in the period.
- To provide insights into the impact of war on higher education and academic research, offering valuable information for policymakers, researchers, librarians and University administrators.

Literature Review

Numerous scientometric studies have been conducted globally to assess research productivity across institutions, using data from leading citation databases such as Web of Science and Scopus. These studies have examined patterns of authorship, collaboration networks, thematic focus, and citation impact in various contexts of publications of University of Jaffna after the civil war in Sri Lanka. However, despite the unique socio-political and academic landscape of Northern Sri Lanka, there is a noticeable lack of systematic scientometric evaluations specifically addressing the research output of the University of Jaffna in the post-civil war era. Significant transformations in infrastructure, academic engagement, and international collaboration following the end of the conflict in 2009, a focused analysis on this institution's scholarly contributions from 2010 to 2024 remains absent in the literature. This gap highlights the need for an in-depth scientometric study that explores the evolution of research productivity, thematic areas,

and citation impact of the University of Jaffna during this critical reconstruction period. Addressing this need, the present study aims to map and assess the intellectual growth, research dynamics, and academic visibility of the University of Jaffna using scientometric tools and Web of science data. The literature review section is structured as follows:

Scientometric studies on research productivity of Universities

Aswathy and Gopikuttan (2013) explores the publication trends across three Universities in Kerala *(University of Kerala, Mahatma Gandhi University, and University of Calicut),* examining factors like authorship patterns, collaboration levels, annual distribution of publications, compliance with Lotka's Law, and distribution by role and year.

Santhakumar et al. (2020) reviews the research productivity of the University of Madras from 2009 to 2018, with an evaluation of 3,283 publications using the Web of Science database. Findings reveal a variable growth pattern in publication output, an average of 10.89 references per article, and an h-index of 65. Chemistry emerged as the leading field, with researchers predominantly publishing in UK journals.

Gopikuttan (2014) focusing on the University of Kerala, evaluates faculty research productivity within the Science Departments from 2000 to 2012, using the Web of Science database. Key metrics include annual and subject-wise publication classifications, most prolific authors, and preferred journals, with additional analysis on impact factors and citation counts.

Balasubramani and Parameswaran (2014) examine the research growth and contributions of scientists at *Banaras Hindu University (BHU)*. It analyzes authors' collaboration patterns and the distribution of their research across various journals, identifying both strengths and weaknesses in the University's research areas. Data for this analysis was sourced from the Web

of Science database, published by the Institute for Scientific Information (ISI).

Research Productivity in Sri Lankan Universities

Pratheepan and Weerasooriya (2016) assesse the research output of faculty members in Sri Lankan Universities, focusing on 650 professors. Using scientometric techniques, it analyzes publications from 1980 to 2014, looking at publication volume, citation impact, and h-index as indicators of faculty productivity.

Previous studies on Research Productivity of University of Jaffna

Janen (2021) conducted a scientometric study to analyze the research publication patterns of the University of Jaffna from 2000 to 2019. The study examined publication growth trends, the most prolific authors and their citation impact, communication patterns based on document type, journal publishing countries, journal impact factors, and international collaborations. The findings revealed that 293 articles were published in Web of Science indexed journals during the study period. A significant increase in publication output was observed after 2014, indicating a consistent growth trend. The study also highlighted that multi-authorship was the dominant authorship pattern among UoJ researchers.

Impact of the civil war on higher education in Sri Lanka

Usoof-Thowfeek and Yamazaki (2024) provided valuable insights into the educational consequences of exposure to conflict, specifically examining the impact of the Sri Lankan Civil War (1983–2009). Using a within-sibling comparison strategy, the study estimates the effects of firsthand experiences of conflict events such as human victimization, property damage, and war-

induced migration on educational attainment. The findings indicate that the impact of conflict exposure varies depending on the type and timing of the event. The study also highlights the prolonged effects of property damage, suggesting that immediate assistance to affected children could play a crucial role in mitigating long-term human capital losses in future generations.

Methodology

This study adopts a systematic approach to collect and analyze bibliometric data from the Web of Science, a leading global citation database. The Data were extracted in October 2024. The Web of Science database was chosen for data collection in this study because it is one of the largest and most comprehensive multidisciplinary databases. It is a highly trusted, publisher-neutral, multidisciplinary citation database known for its rigorous editorial selection and extensive scholarly coverage. Its Core Collection encompasses six major indexes-*Science Citation Index Expanded (SCIE), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (AHCI), Emerging Sources Citation Index (ESCI), Book Citation Index (BCI), and Conference Proceedings Citation Index (CPCI)*-providing thorough, cover-to-cover indexing of over 22,600 journals and holding upwards of 79–95 million records, with some sources reporting over 2.36 billion cited references dating from 1900 to the present. Beyond the Core, the full Web of Science platform includes more than 34,800 journals, over 157,000 books, and some 314,000 conference events-totaling over 235 million records-and nearly 2.95 billion cited references stretching back to 1864. The Core Collection is updated daily, capturing comprehensive author affiliations and citation linkages that support robust bibliometric and scientometric analyses. (Clarivate, 2024)

The methodology begins with the development of a structured search strategy using the keyword "*University of Jaffna*", along with appropriate time filter. In the next step, the search is executed in the Web of Science database by applying institutional and temporal filters to refine the results. The retrieved records were then exported in Plain Text and CSV formats for further analysis. The third step involves data cleaning and preprocessing, where duplicate and inconsistent entries were removed to ensure data accuracy. The cleaned dataset is then categorized based on several variables, including publication year, research domain, citation impact, authorship patterns, keyword distribution, institutional and international collaboration. For the purpose of this study, the focus is on the post-war period (2010–2024). A total of 616 publications from this period were retrieved, covering a range of academic disciplines. Scientometric analysis was carried out using a combination of tools such as *HistCite, Biblioshiny, VOSviewer, and Microsoft Excel.*

Key bibliometric indicators-total citations, average citations per publication, and H-index-were calculated. The 616 publications collectively received 12,232 citations, with an average of 19.86 citations per article and an H-index of 46. To enhance interpretation and clarity, data visualization techniques including tables and figures were employed to illustrate publication trends, authorship patterns, and citation distributions.

Annual Growth Rate (AGR) Formula

$$AGR = \frac{V_{current} - V_{previous}}{V_{previous}} \times 100$$

V current = Research output in the current year

V previous = Research output in the previous year

V = Value of research output

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Data Analysis and Interpretations

Document Type-wise Distribution of Publications

Table-1 shows the types of documents published by University of Jaffna, totally 616 publications were published in nine types of documents with 12,232 total citations. The articles are most popular type of documents; it was accounted 543 (88%) documents with 6,706 citations.

Table 1. Types of Document of UoJ from 2010 - 2024.

Types of Documents	Records	Percentage	TGCS
Article	543	88%	6706
Review article	43	7%	5104
Meeting Abstract	13	2%	05
Early Access	10	2%	08
Proceedings Paper	06	1%	65
Editorial Material	05	1%	408
Letter	04	1%	02
News Item	02	0%	07
Correction	02	0%	00

TGCS-Global Total Citations

Followed by, review article 43 (7%) with 5,104 citations, meeting abstract is 13 (2%) with 05 citations and Article; Early Access 10 (2%) records with 08 citations, Article; Proceedings Paper is 06 (1%) with 65 citations and editorial material 05 (1%) records with 408 citations were published by University of Jaffna from 2010 to 2024.

Research Output from the University of Jaffna in Last Ten (10) Years (2015–2024)

The table 2 highlights the research publication trends of the University of Jaffna over the past ten years (2015–2024), reflecting a consistent and notable growth in scholarly output during the post-war period. The total number of research records increased steadily from 20 publications in 2015 to a peak of 89 in 2023, demonstrating a clear upward trajectory in academic productivity.

Table 2. Research Publications of the University of Jaffna during the Last Ten Years (2015–2024)

Year	Records	Percentage	TGCS
2015	20	4%	1054
2016	23	4%	1670
2017	34	6%	1103
2018	44	8%	1340
2019	48	9%	1801
2020	51	10%	668
2021	73	11%	1058
2022	71	13%	765
2023	89	17%	548
2024	83	15%	115
Total	**536**		**10,122**

TGCS-Global Total Citations

While the number of publications from the University of Jaffna increased steadily between 2015 and 2024, the Total Global Citation Score (TGCS) varied significantly from year to year. The highest TGCS was recorded in

2019 with 1,801 citations**,** followed by 2016 with 1,670 citations**,** and 2018 with 1,340 citations**.**

In total, 616 publications were produced by the University of Jaffna from 2010 to 2024, receiving 12,232 citations. During the initial five-year period (2010–2014)**,** only 80 publications were recorded, with 2,110 citations**,** which are considerably lower compared to the subsequent decade.

Analysis of Research Publications and Citations of University of Jaffna from 2010-2024

Table 3 provides a comprehensive analysis of the research publication and citation trends of the University of Jaffna from 2010 to 2024. Over the 15 year period, the University produced a total of 616 publications, which collectively received 12,232 citations, indicating a steady rise in research productivity and academic impact. In the early years (2010–2012), the output was relatively low, with fewer than 15 publications annually. A significant turning point occurred in 2013, with a sharp increase to 32 publications and an Annual Growth Rate (AGR) of 146.15%, accompanied by a notable rise in citations to 1,238. Although 2014 saw a decline in output and a negative AGR of -56.25%, recovery was swift, and from 2015 to 2019 the university experienced consistent growth in both publications and citations.

The years 2016 and 2019 were particularly strong in terms of impact, recording 1,670 and 1,801 citations, respectively. Post-2020, the number of publications continued to grow, peaking in 2023 with 89 publications. Although citation counts in recent years (2023 and 2024) were lower, this is typical due to the time needed for new research to be cited. The AGR remained mostly positive, with notable increases in 2021 (43.14%). Overall, the data reflects a significant improvement in the research performance of the University of Jaffna, highlighting its expanding academic contributions

and growing visibility in the scholarly community, particularly in the post-war and post-pandemic periods.

Table 3. Analysis of research publications and citations of University of Jaffna.

Year	TP	%	AGR%	TC	%
2010	10	1.62	-	170	1.38
2011	11	1.78	10.00	195	1.59
2012	13	2.11	18.18	338	2.76
2013	32	5.12	146.15	1238	10.12
2014	14	2.27	-56.25	169	1.38
2015	20	3.24	42.86	1054	8.61
2016	23	3.73	15	1670	13.65
2017	34	5.51	47.83	1103	9.01
2018	44	7.14	29.41	1340	10.95
2019	48	7.79	9.09	1801	14.72
2020	51	8.27	6.25	668	5.46
2021	73	11.85	43.14	1058	8.64
2022	71	11.52	-2.74	765	6.25
2023	89	14.44	25.35	548	4.48
2024	83	13.47	-06.74	115	0.94
Total	**616**			**12,232**	

Note: TP-Total Publications, TC-Total Citations, AGR%-Annual Growth Rate

Analysis of Publications trend of UoJ from 2010-2024

In the continuous of table 3, the figure-1 illustrates a clear upward trend in the number of research publications from 2010 to 2024, highlighting a significant growth in scholarly output over the 15-year period. Starting with just 10 publications in 2010, the output increased gradually in the early

years, reaching 13 in 2012. A notable surge occurred in 2013 with 32 publications, suggesting a major boost in research activity, possibly due to enhanced funding or institutional initiatives. Although there was a dip in 2014 (14 publications), the output recovered in the following years, showing a steady rise from 20 in 2015 to 34 in 2017.

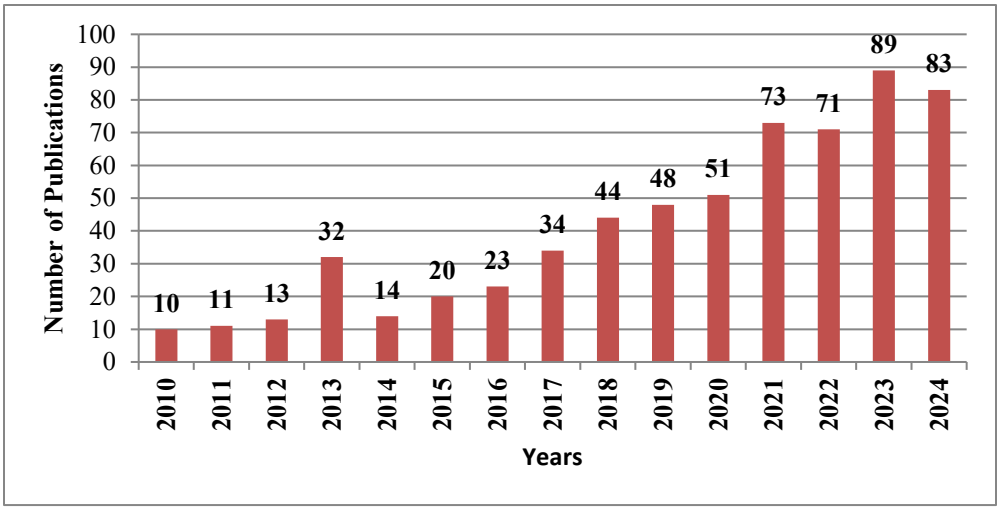

Figure 1: Analysis of Publications trend in Web of Science database from 2010 -2024

From 2018 onwards, the growth became more consistent and robust, with the number of publications increasing each year and peaking in 2023 with 89 publications the highest during the period. A slight decline was observed in 2024 with 83 publications, but the figure remains significantly higher than in previous years. Overall, the figure reflects a strong and sustained increase in research productivity, indicating a maturing research environment and greater institutional or national emphasis on academic output.

Analysis of Citation trend of UoJ from 2010-2024.

Figure-2 illustrates the number of citations received annually from 2010 to 2024. A noticeable upward trend in citations begins in 2012, with a

significant increase from 338 citations in 2012 to a peak of 1801 citations in 2019. The most dramatic rise occurred between 2014 (169 citations) and 2016 (1670 citations), indicating a surge in impactful publications during this period.

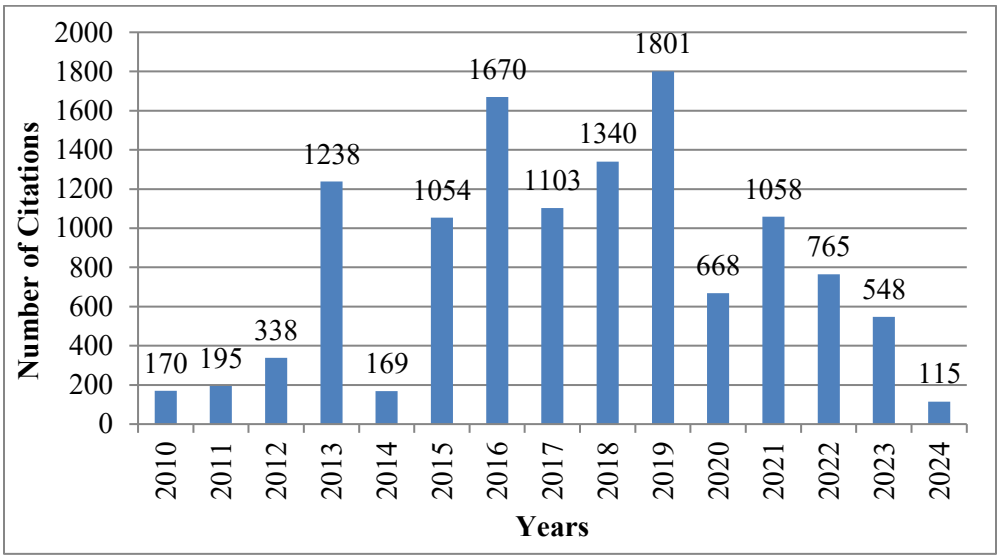

Figure-2 Analysis of Citations trend of UoJ from 2010 to 2024

Following the peak in 2019, there is a general decline in citations, with notable drops in 2020 (668 citations) and 2023 (548 citations). The lowest number of citations within the observed timeframe occurred in 2024 (115 citations), suggesting a possible lag in citation accrual for more recent publications. Overall, the data indicates that the most influential research output, in terms of citation impact, occurred between 2015 and 2019.

Top 10 Productive authors in Post-War period in Web of Science database

Table 4 presents the top ten most productive authors from the University of Jaffna between 2010 and 2024, based on the number of research publications. Leading the list is *Surendran S.N*, who contributed 55 publications**,** accounting for 9% of the total output, and achieved the highest

total global citation score (TGCS) of 1,004, indicating both high productivity and scholarly impact. He is followed by *Ravirajan P* with 40 publications (6%) and 466 citations**,** and *Ramasamy R* with 37 publications (6%) and an impressive 786 citations**,** reflecting strong academic influence. *Velauthapillai D* also demonstrated consistent output with 36 publications and 524 citations**.**

Table 4. Top ten (10) productive authors of University of Jaffna from 2010- 2024.

Author	Records	Percentage	TGCS
Surendran. S.N	55	9%	1004
Ravirajan. P	40	6%	466
Ramasamy. R	37	6%	786
Velauthapillai.D	36	6%	524
Sathiparan. N	28	5%	608
Kuganathan.N	22	4%	288
Subramaniyam.D	18	3%	108
Jude. P.J	17	3%	388
Kokila,S	17	3%	169
Surenthirakumaran. R	17	3%	80

TGCS-Global Total Citations

Sathiparan N, though ranked fifth in output with 28 publications**,** has a notable TGCS of 608**,** highlighting the quality and relevance of their research. Other contributors include *Kuganathan N* (22 publications, 288 citations), *Subramaniyam D* (18 publications, 108 citations), *Jude P.J* (17 publications, 388 citations), *Kokila S* (17 publications, 169 citations), and *Surenthirakumaran R* (17 publications, 80 citations). The data illustrates that while publication count is important, citation metrics also reveal the

academic impact of each author, with some authors achieving high recognition despite fewer publications. This highlights a core group of researchers who significantly contributed to the research profile and international visibility of the University of Jaffna during the study period.

Analysis of Most Impactful author at the University of Jaffna

Table 5 illustrates the top ten highly cited authors in University of Jaffna after the war. Totally, n=616 publications were indexed with 12,232 (77% of total citation) citations from 2010 to 2024. *Vignarooban K,* who published 17 publications with received 2,495 total citations, it is 20% of total citations of University of Jaffna in the period.

Table 5. Analysis the top ten (10) Impactful authors from 2010-2024.

Author	Records	Citation %	TGCS
Vignarooban. K	17	20%	2495
Kannan, A.M	10	19%	2356
Kannan. N	01	9%	1085
Vakeesan. D	01	9%	1085
Surendran.S.N	55	8%	1004
Somasundaram. D.J	02	7%	886
Ramasamy.R	37	6%	786
Sathiparan. N	28	5%	608
Velauthapillai. D	36	4%	524
Ravirajan.P	40	4%	466

TGCS-Global Total Citations

Followed by, *Kannan A.M* published 10 papers and received 2,356 (19%) citations and he is second place in citations table, *Kannan.N* published only one paper, he got 1085 (9%) citation like this *Vakeesan.D* also published

who got 1,085 (9%) citations. *Surendran.S.N.* published 55 publications and received 1,004 (9%) citations. Above mentioned five authors only received nearly seventy percentage (70%) citations of University from 2010 to 2024. But, from 1989 to 2009, during the war time, total citation of University of Jaffna is 3,689. It is only (23%) of total citations of University. 77% citations were received after the war in country.

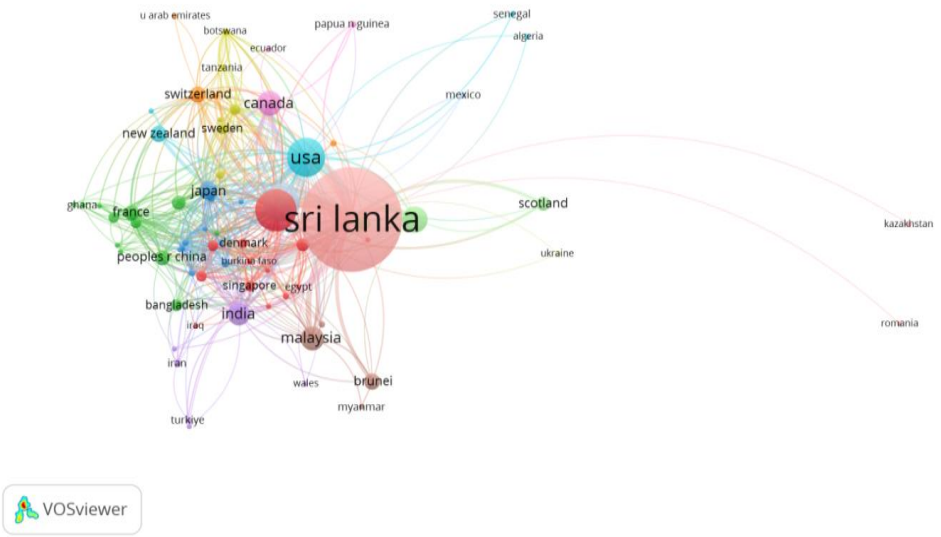

Figure 3. Authorship Collaboration pattern with countries (2010- 2024).

Figure 3 visualizes the authorship collaborations with countries. Totally, n=75 countries contributed to n=616 publications. Sri Lanka is first place the country with 67 links, 5 cluster and 616 documents. Followed by, *England* collaborated with 102 (17%) documents, *USA* 87 (14%), *Norway* 40 (6%), *Canada* 36 (6%), *Malaysia* 33 (5%), *India* 30 (5%), *Japan* 21 (3%) and *Swaziland* collaborated with 16 (3%) documents with Srilankan authors.

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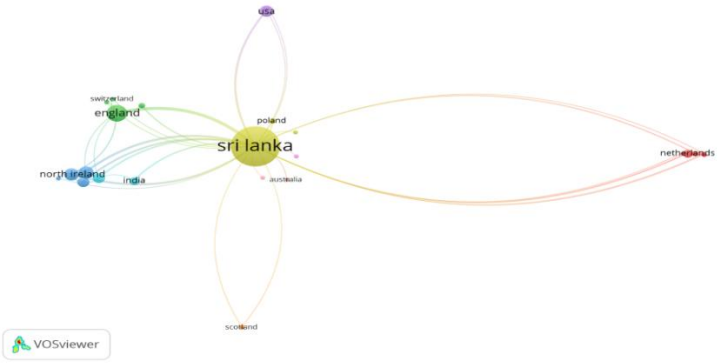

Figure 4: Authorship Collaboration pattern with countries 1989 - 2009 (During the War time)

Figure 4 illustrates the pattern of international authorship collaborations with Sri Lankan researchers from 1989 to 2009. The data reveal that relatively few countries (only n=21 countries) engaged in collaborative research efforts with Sri Lankan authors over this 21-year period (during the war time). After the war, collaborations with other countries increased significantly when comparing the two periods.

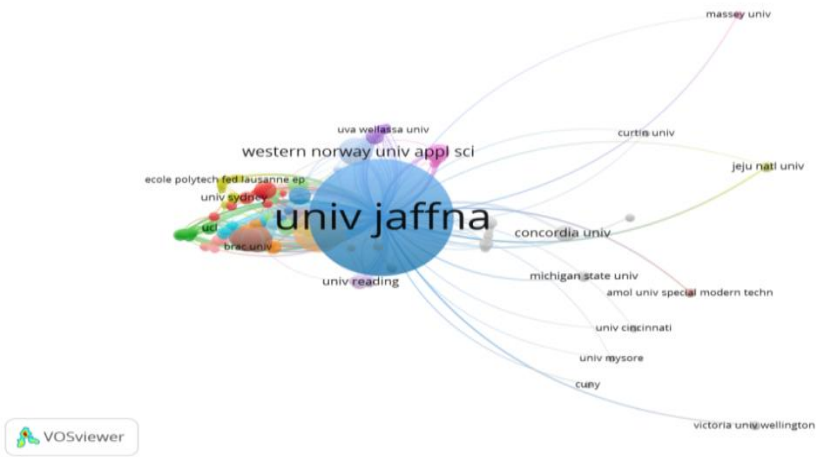

Figure-5 reveals the author Collaboration with other institutions (2010-2024).

Figure-5 illustrates author Collaboration with institutions. University of Jaffna collaborated with 522 institutions in the period of 2010 to 2024. Most of the authors collaborated with University of Jaffna, n=616 publications were published. Followed by, *University of Peradeniya* (71), *Western Norway University* (32), *Imperial College London* (22), *University of Colombo* (22) and *University Malaya* (15) publications were published with University of Jaffna.

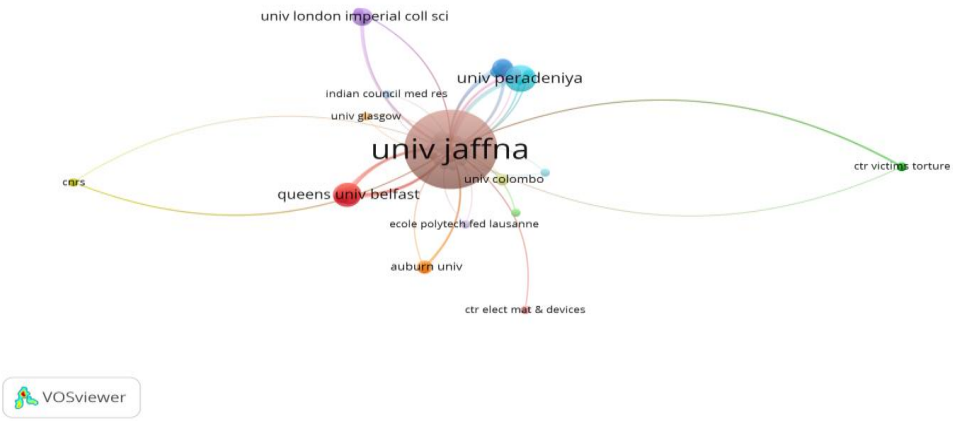

Figure 6. reveals the author Collaboration with other institution 1989-2009 (During the War time)

Figure 6 illustrates author collaboration with other institutions from 1989 to 2009. During this period, especially amid the civil conflict, the University of Jaffna had limited collaboration (n=85 institutions, local and internationals) with other institutions. When comparing the two periods, author collaboration with other institutions increased significantly.

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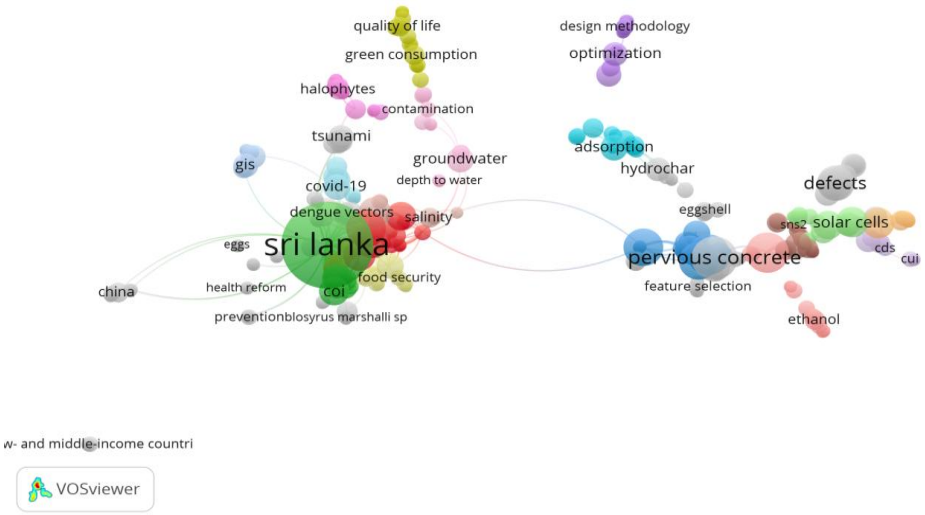

Figure 7. Co-occurrence of author Key words (2010-2024)

Figure 7 visualizes the Co-occurrence of author keywords. Here, totally, 2,674 author keywords occurred in the 616 publications, mostly used keywords are *Sri Lanka*, it was occurred in 54 publications with 02 cluster and 159 links. Followed by, *pervious concrete* (14), *Comprehensive strength* (12), *Mechanical properties* (12), *Sustainability* (10), *Machine learning* (10), *Defect* (09), *Insecticide resistance* (07), *Jaffna* (07) and *Malaria (07*) were occurred in the publications from 2010 to 2024 period.

In scientometric studies, analyzing keywords is essential for identifying the core themes and research focus within a specific field. It helps uncover emerging topics, track the evolution of research trends over time, and detect shifts in scholarly interest. Keyword analysis also reveals commonly explored areas as well as under-researched gaps, guiding future investigations. Additionally, it supports thematic clustering and mapping, which helps visualize how different topics are interconnected.

Dynamic trend of publication Sources

Table-6 presents the rank list of top ten (10) journals preferred by authors of University of Jaffna after the civil war, *Journal of The National Science Foundation of Sri Lanka* was most preferred source of publications with 22 (4%) publications published. Followed by, *Parasites & Vectors published 16 (3%)* publications with 228 citations, *Scientific Reports 11 (2%)* with 256 citations and 10 (2%) publications with 626 citations were published by *Construction and Building Materials.* Totally, 379 journals were published 616 publications from 2010 to 2024 by authors.

Table 6. Top ten (10) Publication Sources at University of Jaffna from 2010-2024.

Journals	Records	Percentage	TGCS
Journal of the National Science Foundation of Srilanka	22	4%	83
ParasitesVectors	16	3%	228
Scientific Reports	11	2%	256
Construction & Building Materials	10	2%	626
International journal of pavement engineering	09	1%	61
Plos One	08	1%	54
Ceramics International	07	1%	195
International Journal of Infectious Diseases	06	1%	14
Journal of Building Engineering	06	1%	209
Malaria Journal	06	1%	140

TGCS-Global Total Citations

In scientometric studies, analyzing journals helps to understand the publication behavior and preferences of researchers. It reveals which journals are most frequently chosen for disseminating research, indicating their relevance, accessibility, and impact within a specific field. This analysis also highlights the visibility and citation potential of research outputs, as publishing in high-impact or widely read journals often leads to greater academic recognition. Furthermore, it assists libraries in collection development by identifying core journals that are most valuable for users.

Analysis of Major Research Areas

Table 7 highlights the most preferred research areas of authors from 2010 to 2024, based on the number of published records. *Engineering* emerges as the most prominent field, accounting for 17% of the records (105 publications) and garnering the highest TGCS at 3,377, reflecting its significant research output and global impact.

Table 7. Top Ten (10) Major Research Areas from 2010 – 2024.

Research Areas	Records	Percentage	TGCS
Engineering	105	17%	3377
Material science	90	15%	1567
Science technology	77	13%	2172
Physics	69	11%	808
Chemistry	62	10%	1051
Construction Building Technology	34	6%	965
Tropical medicine	34	6%	552
Mathematics	33	5%	97
Parasitology	32	5%	543
Environmental Sciences Ecology	29	5%	163

TGCS-Global Total Citations

Material Science follows with 90 records (15%) and 1,567 citations, indicating strong scholarly activity. *Science and Technology,* with 77 records (13%) and 2,172 citations, also shows considerable influence. *Physics and Chemistry*, while slightly lower in record count (69 and 62 respectively), still maintain substantial citation numbers, particularly Chemistry with 1,051 TGCS. Construction and Building Technology and Tropical Medicine each have 34 records (6%), though the former has a notably higher TGCS (965) compared to the latter (552). Other areas such as *Mathematics* (33 records), *Parasitology* (32 records), and *Environmental Sciences & Ecology* (29 records) contribute smaller portions of the total output, with Mathematics receiving the lowest TGCS at 97. Overall, the data suggests that *Engineering, Science & Technology, and Material Science* are not only the most preferred but also the most impactful research areas in terms of global citation influence. Totally, 616 research papers were published in 103 subject areas.

In scientometric studies, analyzing major subject areas is essential to understand the disciplinary focus and research strengths of an institution. It highlights which subjects contribute most to publication output and citation impact, helping to identify areas of excellence and growth. This analysis also supports strategic planning, resource allocation, and benchmarking by revealing trends and gaps across disciplines. Moreover, it enhances understanding of the research landscape, making it a vital tool for informed decision-making and academic development.

Table 8. Most 05 cited papers of University of Jaffna from 2010 to 2024

Title of the Paper	Author/s	%	TGCS
Solar energy for future world: - A review	*Kannan, N & Vakeesan, D*	9%	1085
Recent developments in phase change materials for energy storage applications: A review	*Kannan, et al.*	8%	920
Heat transfer fluids for concentrating solar power systems - A review	*Vignarooban, et al*	5%	646
Diagnosis and classification of disorders specifically associated with stress: proposals for ICD-11	*Somasundaram, DJ* et al	4%	500
A review of current evidence regarding the ICD-11 proposals for diagnosing PTSD and complex PTSD	*Somasundaram, DJ, et al*	3%	388

TGCS-Global Total Citations

Table 8 explains the most 05 cited papers of University are indexed in web of science database. Most of the citations 1,085 (9%) were received by Solar energy for future world: - A review authored by *Kannan,N & Vakeesan, D*, followed by, Recent developments in phase change materials for energy storage applications: A review was received 920 (8%) citation, Heat transfer fluids for concentrating solar power systems - A review were received 646 (5%) citation written by *Vignarooban, K; Xu, XH; Kannan*, AM et al. Next two papers were received citations 500 (4%) and 388 (3%) respectively.

Conclusion

This scientometric study highlights a remarkable transformation in the research productivity of the University of Jaffna during the post-civil war period (2010–2024). Compared to the war years (1989–2009), the University experienced a fivefold increase in scholarly output, reaching 616 publications and accumulating 12,232 citations, signifying enhanced academic engagement and visibility. The peak year was 2022, contributing 85 publications, or 14% of the total output. Among key contributors, *K. Vignarooban* emerged as the most highly cited author with 2,495 citations, while *S.N. Surendran* stood out as the most prolific, with 55 publications. Engineering led as the top research discipline, accounting for 17% of publications and 3,377 citations, reflecting the University's strength in applied sciences. The findings also revealed a surge in international collaboration, particularly with scholars from *England, the USA, Norway, and Canada,* and strong institutional partnerships with the *University of Peradeniya, Western Norway University, and Imperial College London*. The most common publication types were articles and review articles, with the *Journal of the National Science Foundation of Sri Lanka* serving as a key dissemination platform.

Furthermore, the frequent use of the keyword *"Sri Lanka"* emphasized the University's contextual focus. Notably, the most-cited publication-"*Solar energy for future world: A review" by N. Kannan* and *D. Vakeesan*-earned 1,085 citations, underscoring the global impact of the University's research. Overall, this study underscores the University of Jaffna's growing role as a significant contributor to national and international academic discourse in the post-conflict era. This study serves as a benchmark for policymakers,

librarians and researchers aiming to enhance academic research in Sri Lanka and other post-conflict regions worldwide.

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