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Review Article

Research publication analysis: Dayanand medical college and hospital in databases

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Abstract

In this study, the impact of publications by Dayanand Medical College and Hospital on by National Institutional Ranking Frameworks (NIRF) is examined. Which have been available index in Web of Science, Scopus, Google Scholar and ResearchGate in year 2020 to 2022.We considered the Dayanand Medical College and Hospital as defined by the NIRF. The pertinent information was taken from the NIRF, Google Scholar, Research Gate, Scopus and Web of Science.

Keywords: NIRF Ranking, Google Scholar, Research Gate, Scopus and Web of Science, Dayanand Medical College and Hospital, Citations, Publications.

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1. Introduction

The National Institutional Ranking Framework (NIRF), which the Honorable Minister of Human Resource Development proposed on September 29, 2015, was authorized by the Ministry of Human Resource Development (MHRD). This framework offers a system for categorizing educational establishments all around the country. The procedure is based on the basic recommendations and comprehensive understanding achieved by a Core committee created by MHRD in order to set the broad criteria for assessing various schools and institutions. This framework offers a system for categorizing educational establishments all around the country. The procedure is based on the basic recommendations and comprehensive understanding achieved by a Core Committee created by MHRD in order to develop the broad criteria for assessing various schools and institutions. The parameters include topics like "Teaching, Learning, and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception" in broad strokes.[1-3]

1.1. Dayanand medical college and hospital

Dayanand Medical College and Hospital (DMCH) Ludhiana, Punjab, India. Dr. Banarsi Dass Soni, A highly Motivated and devoted personality. with a missionary zeal for medical education and patient care, conceived the noble idea of providing much needed medical care to the general public. It began in a leased facility in Civil Lines, Ludhiana, and blossomed into the Arya Medical School in 1934.The Managing Committee of Arya High School, Ludhiana, appointed a separate Managing Body in 1936, and it moved to its own premises in 1937.According to government policy, the Arya Medical School developed into a full-fledged MBBS College in 1964. This institution later became known as Dayanand Medical College & Hospital. The first batch of the MBBS program meat Dayanand Medical College and Hospital began in 1964.Every year, 100 students are accepted into the MBBS programme through the NEET. The Baba Farid University of Health Sciences in Faridkot, Punjab, manages admissions. At present Dayanand Medical College & Hospital (DMCH) Ludhiana, is a 1625 bedded (Inclusive 800 teaching beds) tertiary care teaching hospital in North India. The management, administration, instructors, staff, and cooperation of the students have all contributed to the success of the DMCH, Ludhiana. The facility features an

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impressive complex of contemporary buildings and is furnished with all types of contemporary amenities for offering top-notch patient care and instruction to undergraduate and graduate students. The diagnostic laboratories and all clinical departments on campus offer round-the-clock service. There are now three campuses: a hospital, a college, and a nursing school. Nearly 500 undergraduates, 106 graduate students, and 135 nursing students participate in health education programmers to spread the name of DMC in many disciplines.[6]

1.2. Scopus

Scopus is edited by Elsevier. In 2004, Scopus was first released. Nearly 34,346 of the nearly 36,377 titles in Scopus are peer-reviewed journals in the top-tier fields of biological sciences, social sciences, physical sciences, and health sciences (22,794 active titles and 13,583 inactive titles; 11,678 publishers total). Trade magazines, book series, and periodicals are just a few of the sources it includes. In order to assess the high quality of each journal listed in the Scopus database, four different numerical quality metrics are utilised for each title: h-Index, Cite Score, SJR (SC Imago Journal Rank), and SNIP (source normalized impact per publication). Lexis-Nexis patent database searches are also included in Scopus searches, but with less capability.[7]

1.3. Web of Science (WOS)

WOS Provides (usually via the internet) access to several databases containing reference and citation data from academic journals, conference proceedings, and other materials in a wide range of academic subjects. The Institute for Scientific Information was responsible for its inception. Clarivate is currently the owner. A citation index is founded on the premise that in science, citations serve as links between linked pieces of research, directing readers to relevant or related scientific information such as journal articles, conference proceedings, abstracts, and so on. A citation index also makes it straightforward to identify the literature that has had the greatest influence on a certain topic or across multiple fields. Linking to all of the articles that have mentioned a specific study, for example, demonstrates how influential that work is.

Current trends, patterns, and emerging fields of research can all be examined in this manner. Eugene Garfield, the "Father of citation indexing of academic literature," established the Science Citation Index, which later gave rise to the Web of Science.[12,16]

1.4. Google Scholar

Google Scholar is a free, publicly accessible web search engine that catalogues the full text or metadata of academic papers in a number of formats and categories. The Google Scholar index, which was first made available in beta form in November 2004, includes peer-reviewed online academic books and journals, abstracts, preprints, theses and dissertations, conference papers, preprints, technical reports, and other scholarly materials like legal decisions and patents. It also contains abstracts and preprints.[17]

1.5. Research Gate

In 2008, IjadMadisch launched Research Gate with the goal of revolutionizing the way scholars do their research. Research Gate was founded in Boston and is presently headquartered in Berlin, Germany. It is supported by numerous U.S venture capital companies and has more than 14 million users, with seven researchers signing up every minute on average (Research Gate, 2015). The popularity of Research Gate has made it possible for scholars to freely publish their articles and communicate their ideas in order to encourage international collaboration. Members may use Research Gate to manage their own articles, ask and answer questions about research, and follow certain researchers to get updates on their papers. Research Gate created its own citation index by removing citations from papers posted to the website and publishing citation counts on article profile pages. Scholars are increasingly uploading the entire text of their works to Research Gate in order to make them freely accessible to everyone.[8-9]

2. Literature Review

Accordingly, Sivakumaren, K. S. (2017)[12] evaluated the articles of Indian Institutes of Management (IIMs) that were indexed in the Web of Science, Scopus, and Indian Citation Index databases. The study's data were obtained from the National Institutional Ranking Framework (NIRF) website's publications section. These databases have indexed a total of 939 papers, with 1996 citations received. Among 939 publications, 203 have been heavily cited by others. The results show that Scopus has the most publications indexed (65.50%), followed by Web of Science (20.55%) and the Indian Citation Index (13.95%).Generally, it is observed that old institutes have been produced a good number of publications than the institutes established in recent years. discussed the NIRF parameters and recommended incorporating other parameters such as h-index of Universities, departments and the faculty members to evaluate the institutions.

Mukherjee (2017)[13] observed that NIRF ranking in India gives more weightage to research and professional practice. Balasubramani, J. and Thangavel, R (2019)[14] compared publication on open access platform and commercial platform they found that open-access database publications are more than commercial databases. The authors recommended that open access could be the best way for institutions publication to reach the masses. The study also suggests including h-index of individual, department and institutions in evaluation criteria of the NIRF. Chakraborty(2021)[15] Data analysis and observation and discussions, the contribution of open access publication is significant in almost all the top-ranking institution. Although

to evaluate the Indian Institutions / Universities, the National Institute of Ranking Framework system has adopted quality parameters, and Research publications are one of the dominant factors in this parameters.Open-access publication as a parameter in the NIRF ranking to encourage institutions to publish more in open access journals. Further, the NIRF should give separately weight age to open access research productivity, documents Impacts, and collaboration in ranking evaluation criteria.

According to Khanna et al. (2017) emphasize on the research work performed by the department of physics and astronomy of Guru Nanak Dev University. The authors analyzed 652 bibliographic records from SCOPUS database. The study clearly indicates that journals are the most preferred form of publication to communicate research works by the researchers. The University had registered the average citation impact per paper of 7.01 per cent and publications received 51 to 100 citations. Among the Indian universities, GND University stood at 23rd rank in terms of publications output (652) and h-index (29), 16th rank in average citation per paper (7.01 percent) and 18th rank in share of high cited papers (1 per cent) and 19th rank in terms of international collaborative papers (27.45 per cent) during 2006-15.

3. Aim and Objective

1. To locate the NIRF-ranked Dayanand Medical College and Hospital.
2. To examine the Dayanand Medical College and Hospital publications on Databases.
3. Analysis of the Dayanand Medical College and Hospital's publications' Citation Rates (CR).

4. Materials and Methods

The Data for the Study have been extracted from the website of NIRF (https://www.Nirfindia.ogr/Home) during June 2023, and the data for the study is extracted from different platforms or websites like Scopus, Web of Science, Google Scholar and ResearchGate.

5. Result

5.1. Medical universities/Institutions ranked by NIRF

The Indian government has given the National Institutional Ranking Framework (NIRF) its approval. The organization's main objective is to rate Indian higher education institutions that will be reviewed by NIRF in 2023 once they have been evaluated by the organization. The **Table 1** lists this objective.[5]

The Indian government has started a new project called the NIRF ranking to evaluate the relative grade of Indian academic institutions and raise the level of higher education to international norms. However, relying solely on numbers for determining academic ranking might occasionally provide inaccurate results. Only publications or citations do not determine NIRF ranking. It refers to the total financial resources available to students and employees at the University or Institute. In 2022 NIRF Ranking Dayanand Medical College Rank is 40 and NIRF Score is 50.32.It is rising and top 35 rank collections NIRF score is 54.75

4.2. Publication of dayanand medical college and hospital in databases

The study has evaluated the publications of Dayanand Medical College and Hospital, which have been indexed in the Web of Science (WOS), Scopus, Google Scholar and Research Gate in the year 2020-2022. (**Table 2**)

Table 1: Medical universities/institutions ranked by NIRF

Rank	Institutions/Universities	States	NIRF Score
1.	All India Institute of Medical Science	Delhi	94.32
2.	Post Graduate Institute of Medical Education and Research	Chandigarh	81.10
3.	Christian Medical College	Tamil Nadu	75.29
4.	National Institute of Mental Health & neuro Sciences, Bangalore	Karnataka	72.46
5.	Jawaharlal Institute of Post Graduate Medical Education & Research	Pondicherry	72.10
6.	Amrita Vishwa Vidyapeetham	Tamil Nadu	70.84
7.	Sanjay Gandhi Postgraduate Institute of Medica Science	Uttar Pradesh	69.62
8.	Banaras Hindu University	Uttar Pradesh	68.62
9.	Kasturba Medical College, Manipal	Karnataka	66.75
10.	Sree Chitra Tirunal Institute for Medical Science and Technology	Kerala	65.24
11.	Madras Medical College and Government General Hospital	Tamil Nadu	64.43
12.	King George’s Medical University	Uttar Pradesh	63.93
13.	All India Institute of Medical Sciences Jodhpur	Rajasthan	62.43
14.	Vardhman Mahavir Medical College and Safdarjung Hospital	Delhi	61.73
15.	Dr. D. Y. Patil Vidyapeeth	Maharashtra	61.35
16.	Siksha `O` Anusandhan	Odisha	0.66
17.	All India Institute of Medical Sciences Bhubaneswar	Odisha	60.65
18.	Saveetha Institute of Medical and Technical Sciences	Tamil Nadu	60.61

19.	St. John's Medical College	Karnataka	60.49
20.	S.R.M. Institute of Science and Technology	Tamil Nadu	60.47
21.	Sri Ramachandra Institute of Higher Education and Research	Tamil Nadu	60.44
22.	All India Institute of Medical Sciences, Rishikesh	Uttarakhand	60.06
23	Institute of Liver and Biliary Sciences	Delhi	59.59
24.	Institute of Post Graduate Medical Education & Research	West Bengal	58.49
25.	Datta Meghe Institute of Higher Education and Research	Maharashtra	58.48
26.	Kalinga Institute of Industrial Technology	Odisha	57.39
27.	All India Institute of Medical Sciences, Patna	Bihar	57.30
28.	Aligarh Muslim University	Uttar Pradesh	56.92
29.	Jamia Hamdard	Delhi	56.36
30.	Kasturba Medical College, Mangalore	Karnataka	56.30
31	Lady Hardinge Medical College	Delhi	55.78
32.	Govt. Medical College & Hospital	Chandigarh	55.34
33.	Maulana Azad Medical College	Delhi	55.34
34.	Maharishi Markandeshwar	Haryana	54.87
35.	Dayanand Medical College	Punjab	54.75

Table 2:

Sr. No.	Source	Number of Publications	Number of Citations & No. of Readers
1	Web of Science	216	1265
2	Scopus	416	1755
3	Google Scholar	745	3606
4	Research Gate	1000	46579

Table 2 shows those 2377 Publications of Dayanand Medical College and Hospital, Ludhiana, 416 Publication and 1755 Citations in Scopus, 216 Publications and 1265 Citations in Web of Science, 745 Publications and 3606 Citations in Google Scholar, 1000 Publications and 46579 Readers in Research Gate.

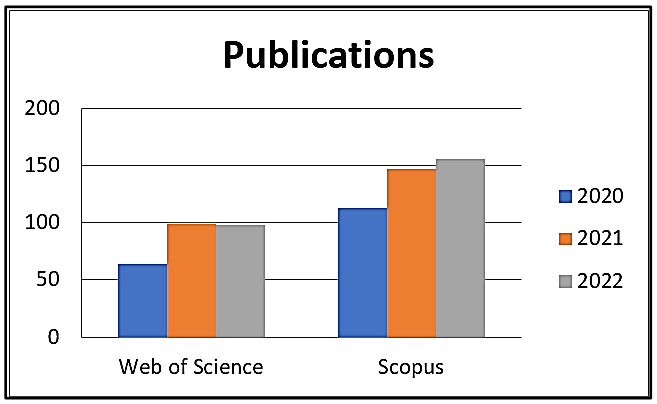

Figure 1: Publications

Figure 1 Shows that the Publications of Dayanand Medical College and Hospital. "Web of Science" 2020 Publication Number is 64, 2021 Publication Number is 99, and 2022 Publication Number is 98. "Scopus" 2020 Publication Number 113, 2021 Publication Number is 147 and 2022 Publication Number 156.

Figure 2 Shows that the Citation of Dayanand Medical College and Hospital "Web of Science" 2020 Citation Number is 773, 2021 Citation Number is 346, and 2022 Citation Number is 146. "Scopus" 2020 Citation Number 1092, 2021 Citation Number is 430 and 2022 Citation Number 233.

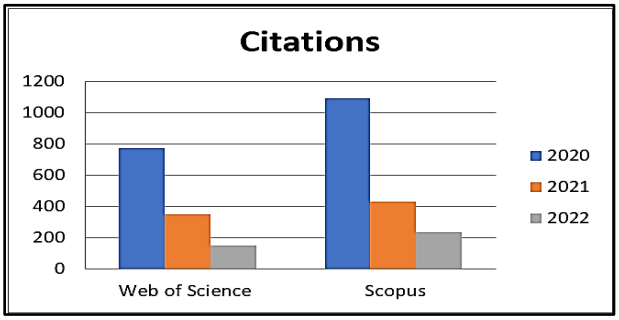

Figure 2: Citations

Figure 3 Shows that the Publication and Citations of Dayanand Medical College and Hospital "Google Scholar" 2020 Publication Number is 176 and Number of Citations is 2726, 2021 Number of Publication is 294 and Number of Citations is 553, 2022 Number of Publication is 275 and Number of Citation is 327.

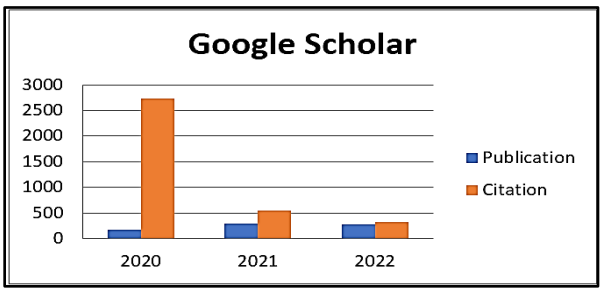

Figure 3: Google Scholar

Figure 4 Show that Number of Publications, Members and Number of Readers in Research Gate. In Research Gate Show 209 Total number of DMC Member are registered in RG, and

Number of Publications is 1000. Number of Readers is 46579 in ResearchGate.

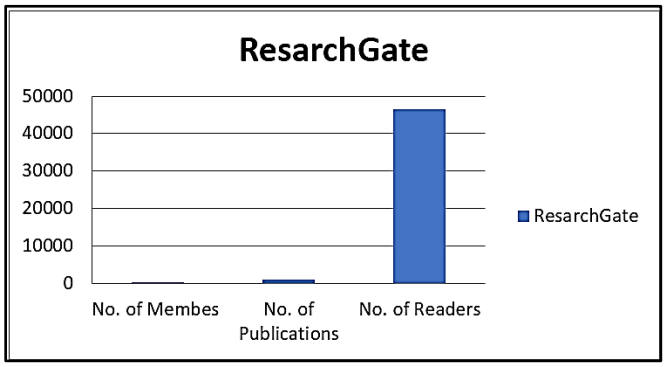

Figure 4: Research gate

6. Conclusion

In India, the National Institute of Ranking Framework methodology has been developed to assess the level of medical universities and institutions. Based on their quality metrics, medical universities and institutions have achieved top rankings in NIRF. Research papers are the most important component in these quality metrics.

7. Recommendations

In India, publications at medical universities and institutions are performing well. According to the survey, Research Gate articles are more numerous than those in other commercial databases. As a result, our study suggests that open access is the best method for making research articles from all institutions accessible to the general public.

8. Source of Funding

None.

9. Conflict of Interest

None.

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