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Scholarly Output and Citation Impact of the Indian Journal of Medical Research (2014–2024): A Scientometric Analysis using Scopus and Scival

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ABSTRACT

Background: The Indian Journal of Medical Research (IJMR), founded in 1913 and published by the Indian Council of Medical Research (ICMR), is India's oldest continuously published biomedical journal. Notwithstanding its historical eminence, no comprehensive scientometric analysis covering its most recent decade of output has been conducted using the SciVal analytics platform. Objectives: This study evaluates IJMR's scholarly output, citation impact, authorship patterns, institutional and geographical distributions, thematic landscape, collaboration networks, and funding structures for the period 2014–2024. Methods: Publication and citation data were retrieved from Scopus; normalised bibliometric indicators — including Field-Weighted Citation Impact (FWCI) and SciVal Topic Prominence Percentile — were generated via SciVal. Network visualisations were produced using VOSviewer. Results: IJMR produced 2,745 Scopus-indexed documents accumulating 35,371 citations over the study period (mean CPP = 12.9; overall FWCI = 0.62). Annual output peaked in 2020 (n = 378), driven by the COVID-19 pandemic, and declined to 167 by 2024. Original articles dominated output (54.0%). ICMR was the pre-eminent institutional contributor (548 documents; FWCI = 0.90). India accounted for 75.4% of total authorship; internationally collaborative papers, though only 8.8% of output, achieved the highest FWCI (0.90). COVID-19 and tropical endemic diseases dominated the thematic landscape, with two topics surpassing the 99th SciVal Topic Prominence Percentile. Conclusions: IJMR remains the principal vehicle for Indian biomedical research dissemination. Its sub-world-average FWCI identifies expanded international collaboration and thematic diversification as the most actionable levers for improving global citation competitiveness.

INTRODUCTION

Scientometrics — the quantitative study of science and its outputs — has become indispensable for research evaluation, policy formulation, and the strategic management of journals, institutions, and national research systems. By mapping publication trends, citation patterns, collaboration networks, and thematic momentum, scientometric approaches enable evidence-based assessment of research performance and disciplinary evolution (Zanotto & Carvalho, 2021; Szomszor et al., 2021). The application of these methods to individual journals has emerged as a particularly productive sub-genre of informetrics, furnishing editors, policymakers,

and benchmarking researchers with actionable intelligence on output trajectories, thematic positioning, and citation competitiveness.

The Indian Journal of Medical Research (IJMR) occupies a singular position in South Asian biomedical scholarship. Founded in 1913 under the Indian Research Fund Association and subsequently the flagship publication of the Indian Council of Medical Research (ICMR), IJMR is among the longest continuously published medical journals in Asia. It publishes peer-reviewed original research, reviews, correspondence, notes, and editorials spanning the biomedical sciences, with particular emphasis on communicable diseases, public health, and topics of national health priority. Indexed in Scopus, PubMed, MEDLINE, and other major databases, IJMR constitutes the primary conduit through which ICMR-sponsored and broader Indian biomedical research reaches the global scientific community (Indian Journal of Medical Research, 2025).

Despite IJMR's prominent role, its contemporary scientometric profile remains incompletely characterised. Earlier bibliometric assessments examined IJMR publications during 2000–2005 using methodological frameworks centred on authorship patterns and source-wise publication counts. None has deployed the combined analytical power of Scopus and SciVal — a gap of considerable significance given the transformative impact of the COVID-19 pandemic on Indian biomedical research volumes, the introduction of new national health research priorities under India's National Health Policy 2017, and India's accelerating integration into global biomedical science. The present study addresses this gap by providing the most methodologically comprehensive scientometric analysis of IJMR yet undertaken, covering the eleven-year period 2014–2024.

LITERATURE REVIEW

The scientometric analysis of biomedical journals has a well-established tradition in informetrics. Gupta and Bala (2011) conducted a foundational study of Indian research output in medicine during 1999–2008 using Scopus, revealing that India held twelfth rank globally in medicine with a publication share of 1.59% and a growth rate of 76.68% over the decade. Crucially, they identified international collaboration as a critical driver of citation impact — a finding that anticipates and contextualises the collaboration analysis presented here. Their call for strategic investment in Indian medical research infrastructure remains germane to the present study's recommendations.

Journal-level bibliometric analyses have since proliferated as a distinct informetrics genre. Koley (2026) examined author productivity and Lotka's Law in the Nursing Journal of India (2010–2024), demonstrating that Indian nursing research conforms to the inverse square law of authorship productivity and that institutional collaboration is the dominant co-authorship mode. These patterns are tested here against IJMR's structurally different disciplinary and institutional context. Mondal (2025) provided methodological benchmarks for journal-level analysis by examining publication trends, geographic distribution, and thematic evolution in the Journal of Data Science, Informetrics, and Citation Studies, the present study extends analogous methods to a biomedical journal of substantially greater scale and historical depth. Giri and Das (2023) similarly profiled the Journal of Scientometric Research across its first eleven volumes, establishing a useful precedent for comprehensive temporal assessments of journal output.

At the level of Indian medical journals specifically, Patralekh et al. (2021) demonstrated divergent output trajectories across three orthopaedic journals from India during 2015–2020, attributing the divergence to differences in editorial policy, issue frequency, and international visibility. These contextualise IJMR's own output fluctuations over the study period. Dhawan et al. (2024) assessed the state of bibliometrics research in India for 2014–2023, revealing growing productivity yet persistent citation impact gaps relative to global benchmarks — a pattern consistent with the FWCI findings reported below.

The methodological framework of this study draws on validated SciVal applications. Zanotto and Carvalho (2021) established that FWCI and Topic Prominence Percentile, deployed together, furnish a richer and more interpretable picture of citation impact than raw citation counts alone. Sarode and Khaparde (2026) and Koley (2024) have applied h-index, FWCI, and career-level author profiling in ways that are complementary to the journal-level analysis undertaken here. To the authors' knowledge, no prior study has applied this integrated Scopus–SciVal–VOSviewer framework to IJMR over a period of comparable length or recency.

Statement of the Problem

No study has employed the combined capability of Scopus and SciVal to furnish a multidimensional, decade-long assessment of IJMR's scholarly output. This gap is significant because the COVID-19 pandemic (2020–2022) profoundly altered Indian biomedical research volumes and thematic priorities; India's National Health Policy 2017 reshaped research investment across institutions; and India's integration into global biomedical science has deepened substantially since earlier bibliometric assessments were conducted. The present study addresses

this gap through a comprehensive scientometric analysis of IJMR for 2014–2024, contextualised against prior work on Indian medical journals, and intended to be of direct value to IJMR's editorial leadership, ICMR policymakers, journal-benchmarking researchers, and the global informetrics community.

STUDY OBJECTIVES

The specific objectives of this study are:

· To map annual growth trends and fluctuations in IJMR's scholarly output and citation impact over 2014–2024.

· To characterise the distribution of publication types and their citation performance.

· To identify the most productive and highest-impact authors, institutions, and contributing countries.

· To delineate prominent research topics and their global momentum using SciVal Topic Prominence Percentiles.

· To assess geographical and institutional collaboration patterns and their differential effects on citation impact.

· To map the landscape of keyword co-occurrence and international co-authorship networks using VOSviewer.

METHODOLOGY

Data Source and Retrieval

Publication and citation data were retrieved from the Scopus database (Elsevier B.V.) via its source-level search interface, restricting results to documents published in the Indian Journal of Medical Research for the years 2014–2024 inclusive. Scopus was selected in preference to Web of Science due to its superior coverage of Indian biomedical journals and its seamless integration with the SciVal analytics platform (van Eck & Waltman, 2010; Manoj Kumar et al., 2022). All Scopus-recognised document types were included without restriction. Normalised bibliometric indicators — FWCI and SciVal Topic Prominence Percentile — were generated in SciVal for the same source and date range. Data retrieval was completed in the first quarter of 2025; citation counts therefore reflect accumulations up to that date. Institutional data were cross-verified against a SciVal institutional export retrieved in April 2026.

Descriptive statistical analysis was performed on all quantitative indicators. Compound annual growth rates (CAGR) were calculated for defined sub-periods of scholarly output. Thematic analysis was based on SciVal Topic clusters — algorithmically derived groupings of Scopus documents sharing intellectual content, publication venue, and citation relationships. Collaboration analysis employed the SciVal collaboration module, classifying each document according to the highest collaboration level represented in its author list. VOSviewer network maps were generated from the exported Scopus bibliographic dataset using minimum co-authorship and co-occurrence thresholds calibrated to the dataset size. No inferential statistical modelling was applied.

Bibliometric Indicators

· Scholarly Output (SO): Total Scopus-indexed documents per year.

· Citation Count (CC): Cumulative citations received by all documents published in a given year.

· Citations per Publication (CPP): Ratio of CC to SO; a non-normalised citation intensity measure.

· Field-Weighted Citation Impact (FWCI): The ratio of citations actually received to the expected number for documents of the same type, publication year, and subject field. FWCI = 1.0 represents the world average; values above 1.0 denote above-average citation impact (Zanotto & Carvalho, 2021).

· SciVal Topic Prominence Percentile (TPP): An indicator of the global research momentum of a SciVal Topic cluster, combining citation velocity, Scopus page views, and CiteScore. Higher percentiles identify topics of exceptional current global relevance.

· h-index: Applied at the author level; the largest value h such that h publications have each received at least h citations.

· VOSviewer Network Maps: Country-level co-authorship and author keyword co-occurrence maps were constructed using VOSviewer (version 1.6.20) to visualise structural patterns in international collaboration and thematic clustering (van Eck & Waltman, 2010).

Scope and Limitations

This study is restricted to data indexed within the Scopus database and excludes publications available solely in PubMed or other indexing platforms. Citation metrics for the most recent years (2023–2024) remain comparatively low, primarily due to the limited time available for citation accumulation; hence, they should not be considered definitive indicators of research quality or impact. Variations in author names and institutional affiliations within Scopus may result in minor discrepancies in attributing contributions and rankings. Additionally, funding acknowledgement information in Scopus is based on author disclosures and is often incomplete, leading to an underestimation of the actual extent of funded research.

DATA ANALYSIS AND RESULTS

Annual Scholarly Output and

Citation Trends

Over 2014–2024, IJMR produced 2,745 Scopus-indexed documents that accumulated 35,371 citations, yielding a mean CPP of 12.9 and an overall FWCI of 0.62 (Table 1; Figure 1). Annual output was markedly non-linear, ranging from 167 documents in 2024 to 378 in 2020. The 2020 peak represented a 55.6% increase over 2019 output (n = 243) and is directly attributable to the COVID-19 pandemic: IJMR served as the primary domestic publication outlet for India's emergency research response, accelerating the review and publication of pandemic-related findings across clinical, epidemiological, and public health domains. The surge was followed by a steep decline — to 233 in 2021, 211 in 2022, 172 in 2023, and 167 in 2024 — consistent with a return to pre-pandemic editorial selectivity and a normalisation of submission volumes across Indian biomedical research.

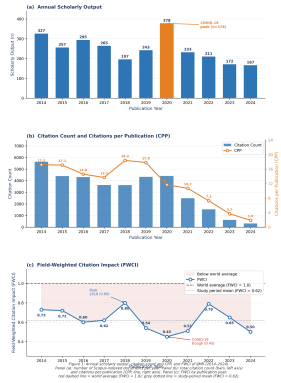

Figure 1. Annual scholarly output, citation count and CPP (citations per publication), and Field-Weighted Citation Impact (FWCI).

The year 2014 generated the highest cumulative citation count (5,634; CPP = 17.2), as expected given the substantially longer citation accumulation window. More instructive is the observation that 2018 achieved the study period's highest CPP (18.4) despite producing only 197 documents — the second-lowest annual output in the series — implying a concentration of unusually high-impact publications in that cohort. The FWCI trajectory (Figure 1, lower panel) reveals a pronounced trough in 2020 (FWCI = 0.45), coinciding with the COVID-19 output surge, and twin peaks in 2018 (0.80) and 2022 (0.79), years characterised by more selective but consistently high-impact publishing. The 2020 trough is consistent with the bibliometric literature on crisis publishing: rapid communications and brief notes — document types that proliferate during public health emergencies — generate fewer citations per document than substantive original research, thereby depressing aggregate normalised impact (Gupta & Bala, 2011).

Table 1: Annual Scholarly Output and Citation Trends, IJMR (2014–2024)

Year	Scholarly Output	Citation Count	CPP	FWCI
2014	327	5,634	17.2	0.73
2015	257	4,406	17.1	0.72
2016	295	4,320	14.6	0.60
2017	265	3,633	13.7	0.62
2018	197	3,631	18.4	0.80
2019	243	4,333	17.8	0.54
2020	378	4,418	11.7	0.45
2021	233	2,498	10.7	0.51
2022	211	1,541	7.3	0.79
2023	172	632	3.7	0.65
2024	167	325	1.9	0.50
Overall	2,745	35,371	12.9	0.62

Document Type Distribution

Table 2 presents the distribution of the 2,745 unique documents across Scopus-recognised document types. Original research articles constituted the dominant category (1,483; 54.0%), reflecting IJMR's primary function as a vehicle for peer-reviewed empirical research. Notes (484; 17.6%) and Reviews (447; 16.3%) together account for a further third of output, underscoring the journal's role in rapid scientific communication and evidence synthesis. Letters (374; 13.6%) confirm a vibrant correspondence culture characteristic of journals embedded within active research communities. Editorials (153; 5.6%), Errata (17;

0.6%), Short Surveys (9; 0.3%), Retracted documents (2; 0.1%), and Conference Papers (1; <0.1%) make up the remainder. The two retracted documents signal active post-publication quality oversight, and their negligible proportion (0.07%) speaks to the integrity of IJMR's review process.

Table 2: Distribution of Scholarly Output by Document Type, IJMR (2014–2024)

Document Type	Count	Share (%)
Article	1,483	54.0
Note	484	17.6
Review	447	16.3
Letter	374	13.6
Editorial	153	5.6
Erratum	17	0.6
Short Survey	9	0.3
Retracted	2	0.1
Conference Paper	1	<0.1
Total (unique documents)	2,745	—

Most Productive and Influential Authors

Table 3 presents the nine leading authors by scholarly output in IJMR over 2014–2024. Yadav Pragya Dhruv (ICMR) led with 54 publications, followed by Bhargava Balram (AIIMS New Delhi; 45) and Gupta Nivedita (ICMR; 40). All nine leading contributors are affiliated with Indian institutions and the overwhelming majority with ICMR, demonstrating that the journal's intellectual core is anchored within the apex national research council that publishes it. The concentration of output among ICMR researchers partly reflects the organisation's scale and structural mandate to conduct nationally relevant biomedical research, but also raises questions about the diversity of IJMR's authorship base — a point addressed in the Discussion.

A important distinction emerges between volume and impact productivity. Gangakhedkar Raman Raghunathrao (MGM Institute of Health Sciences) achieved the highest FWCI in the top-nine cohort (1.90) alongside the highest raw citation count (1,257), and Murhekar Manoj Vasant (ICMR) followed closely with FWCI = 1.85 and 710 citations. Both researchers are specialists in epidemiology and emerging infectious diseases — areas that command globally significant and rapidly responsive readership. These two are the only members of the top nine whose FWCI exceeds the world-average threshold of 1.0, demonstrating that purposeful, high-profile disease surveillance and epidemiological research can generate above-average global citation recognition within the IJMR portfolio, even when embedded in a journal whose aggregate FWCI remains sub-world-average.

Table 3: Top Nine Authors by Scholarly Output in IJMR (2014–2024)

Author	Affiliation	Output	h-index	FWCI	Citations
Yadav, Pragya D.	ICMR	54	41	1.17	1,113
Bhargava, Balram	AIIMS New Delhi	45	46	1.13	810
Gupta, Nivedita	ICMR	40	37	1.21	944
Panda, Samiran	ICMR	35	32	1.09	580
Gangakhedkar, R.R.	MGM Institute of Health Sciences, Navi Mumbai	34	35	1.90	1,257
Mourya, Devendra T.	ICMR	32	38	0.74	533
Abraham, Priya	Christian Medical College, Vellore	31	35	1.28	735
Murhekar, Manoj V.	ICMR	27	40	1.85	710
Potdar, Varsha A.	ICMR	24	28	1.30	575

Institutional Contributors

The ten leading institutions by scholarly output are presented in Table 4. ICMR headquarters contributed 548 publications — more than double the output of second-ranked AIIMS New Delhi (270) — and achieved the highest institutional FWCI (0.90) in the dataset, approaching the world average. Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh (189 publications; FWCI = 0.73), the Ministry of Health and Family Welfare (87; FWCI = 0.82), Christian Medical College Vellore (78; FWCI = 0.91), and JIPMER Puducherry (64; FWCI = 0.68) complete the top five domestic contributors.

Two observations merit particular attention. First, Christian Medical College Vellore achieved the highest CPP (17.8) and the second-highest FWCI (0.91) among all listed institutions, despite ranking fifth in output volume — a pattern suggesting that editorial selectivity and institutional research culture can partially compensate for lower submission rates in generating per-paper citation impact. Second, the World Health Organization (Switzerland) ranks seventh with 53 publications and FWCI = 0.85, reflecting the joint international public health research programmes in which IJMR routinely participates, particularly in infectious disease surveillance and global burden-of-disease studies. The presence of a non-Indian government body in the top-ten institutional rankings also illustrates the extent to which IJMR functions as a platform for globally relevant — not merely nationally circumscribed — biomedical research.

Table 4: Top 10 Contributing Institutions by Scholarly Output in IJMR (2014–2024)

Institution	Sector	Output	CPP	FWCI	Citations
Indian Council of Medical Research (ICMR)	Govt.	548	16.5	0.90	9,031
AIIMS, New Delhi	Govt.	270	14.1	0.68	3,817
PGIMER, Chandigarh	Academic	189	13.9	0.73	2,623
Ministry of Health & Family Welfare	Govt.	87	14.8	0.82	1,291
Christian Medical College, Vellore	Academic	78	17.8	0.91	1,388
JIPMER, Puducherry	Academic	64	11.5	0.68	738
World Health Organization (Switzerland)	Govt./Int.	53	16.3	0.85	862
King George's Medical University	Academic	51	19.5	0.70	993
University of Delhi	Academic	49	16.7	0.55	817
Sanjay Gandhi PGI, Lucknow	Academic	48	15.5	0.52	743

Geographical Distribution of Contributing Countries

Table 5 presents the ten principal contributing countries. India dominated authorship with 2,070 publications (75.4% of total; CPP = 12.9; FWCI = 0.63), a proportion reflective of IJMR's institutional mandate and its deep embeddedness in the Indian research ecosystem. The United States ranked second (126 publications; FWCI = 0.74) and the United Kingdom third (63; CPP = 18.6; FWCI = 1.11). Collectively, the United Kingdom and Canada are the only two countries among the top ten to exceed the world-average FWCI threshold of 1.0. Canada, with just 15 publications, recorded the highest FWCI of all listed countries (1.58), indicating a pattern of highly selective, high-impact contributions in specialised domains — likely reflecting contributions from Canadian researchers to specific infectious disease or public health investigations.

The lowest FWCI values were recorded by Turkey (0.30) and China (0.37), two countries with growing presence in international biomedical literature. These values may reflect discipline-specific citation norms, the early-career developmental stage of these countries' IJMR contributions, or the relatively recent onset of their collaborative engagement with the journal. The presence of Switzerland (FWCI = 0.75, n = 27) and the World Health Organization's Geneva headquarters reflects IJMR's sustained participation in WHO-coordinated multilateral research programmes.

Table 5: Top 10 Contributing Countries by Scholarly Output in IJMR (2014–2024)

Country/Region	Output	CPP	FWCI	Citations
India	2,070	12.9	0.63	26,649

United States	126	9.9	0.74	1,249
United Kingdom	63	18.6	1.11	1,174
Turkey	39	7.3	0.30	284
China	38	8.1	0.37	308
Australia	31	7.9	0.65	245
Iran	31	15.7	0.56	487
Switzerland	27	14.3	0.75	386
Italy	19	13.6	0.79	259
Canada	15	16.3	1.58	244

Research Topics and SciVal Topic Prominence

Table 6 presents the nine most prominent SciVal research topics associated with IJMR publications, sorted in descending order of Topic Prominence Percentile. The thematic landscape reflects two distinct dimensions of IJMR's intellectual contribution: acute pandemic responsiveness and sustained investment in tropical and neglected infectious diseases.

In the pandemic domain, three COVID-19 topics dominate the prominence ranking. SARS-CoV-2 Variants and Immune Response Dynamics (TPP = 99.92) and Vaccine Efficacy and Immune Response in COVID-19 (TPP = 99.90) represent the frontier of the most intensively researched scientific area of the past decade, placing IJMR at the very apex of global research momentum in those clusters. The Clinical Insights into COVID-19 Patient Outcomes topic (TPP = 98.85) achieved the highest FWCI in the dataset (1.91), confirming that IJMR's most analytically substantive pandemic outputs attracted genuinely above-world-average citation recognition — in contrast to the aggregate FWCI depression caused by high volumes of brief pandemic communications (see §5.1).

Among endemic disease topics, Scrub Typhus and Orientia Tsutsugamushi (TPP = 89.23; FWCI = 1.01) is particularly significant: it is the only topic in the dataset for which IJMR simultaneously achieves above-world-average citation impact and very high global prominence — a dual distinction that underscores the journal's unique and internationally recognised expertise in this neglected tropical disease. Mycobacterium Leprae and Leprosy Management (TPP = 90.80; FWCI = 0.86) and Resistance in Mycobacterium Tuberculosis Treatment (TPP = 94.08) reflect IJMR's sustained contributions to India's highest-burden infectious disease challenges. The One Health Framework for Zoonotic Disease Management topic (TPP = 98.55) signals a rapidly growing area of global scientific interest that aligns naturally with IJMR's infectious disease strengths and represents a compelling strategic opportunity. Figure 2 presents the SciVal Key Phrases map, visually summarising the keyword landscape associated with IJMR's output.

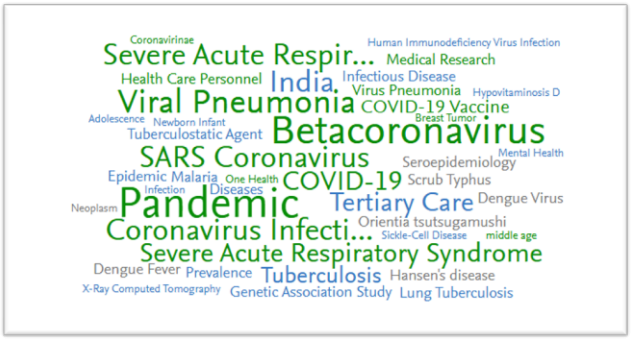

Figure 2. SciVal Key Phrases Map

Table 6: Top Research Topics by SciVal Topic Prominence Percentile

Topic	Output	IJMR Share (%)	FWCI	Prominence %ile
SARS-CoV-2 Variants & Immune Response Dynamics	16	0.13	1.69	99.92
Vaccine Efficacy & Immune Response in COVID-19	17	0.17	0.73	99.90
Clinical Insights into COVID-19 Patient Outcomes	17	0.13	1.91	98.85
One Health Framework & Zoonotic Disease Management	16	0.57	0.41	98.55
Resistance in Mycobacterium Tuberculosis Treatment	14	0.53	0.50	94.08
Hydroxychloroquine's Role in COVID-19 Treatment	24	0.63	0.56	93.93
Mycobacterium Leprae & Leprosy Management	18	0.77	0.86	90.80
Scrub Typhus & Orientia Tsutsugamushi	24	1.64	1.01	89.23

Hypertension Prevalence & Risk Factors in India	22	2.73		0.63	87.37

Collaboration Patterns

Table 7 and Figure 3 report the collaboration structure of IJMR's output. Institutional collaboration (single-country, multi-institution) was the numerically dominant mode, accounting for 43.3% of all publications (1,189 documents; CPP = 12.6; FWCI = 0.56). National collaboration — involving multiple institutions within India, across organisational boundaries — constituted 37.3% (1,024 documents; FWCI = 0.66). Single authorship, while modest in share (10.0%; 274 documents), generated the lowest FWCI (0.54), reflecting the well-documented citation disadvantage of non-collaborative research. The four categories collectively account for 2,729 documents; the remaining 16 (0.6%) could not be classified owing to incomplete affiliation data in Scopus.

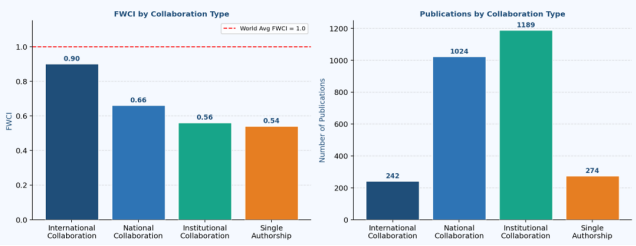

Figure 3. Collaboration patterns in IJMR (2014–2024). Left panel: FWCI by collaboration type; the red dashed line at FWCI = 1.0 denotes the world average. Right panel: publication volume by collaboration type.

International collaboration, though accounting for only 8.8% of total output (242 documents), generated distinctly superior citation returns: CPP = 16.5 and FWCI = 0.90 — the highest FWCI of any collaboration mode and the only mode approaching the world-average threshold of 1.0. The differential between international (0.90) and single-institution (0.56) FWCI represents a 61% relative advantage, a magnitude consistent with findings from the broader bibliometric literature on the citation benefits of cross-border collaboration (Gupta & Bala, 2011; Szomszor et al., 2021). Total citations across all four categories sum precisely to 35,371, confirming internal consistency of the collaboration dataset. Figure 4 presents the country-level co-authorship network, and Figure 5 maps the author keyword co-occurrence structure.

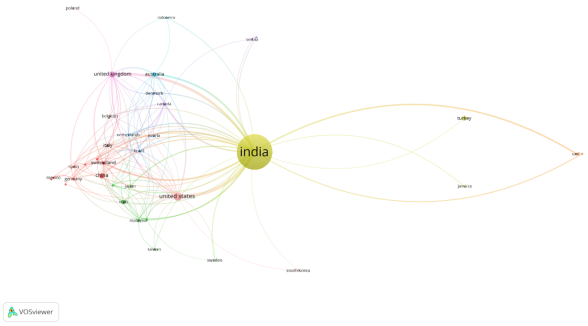

Figure 4. Country-level co-authorship network map

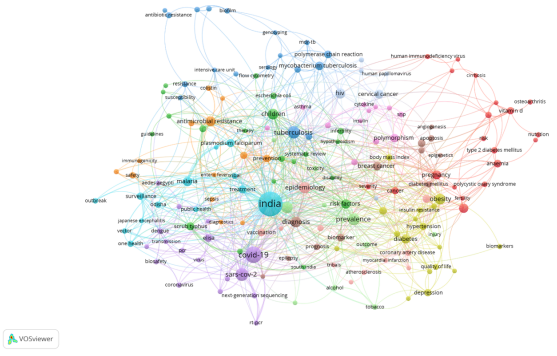

Figure 5. Author keyword co-occurrence network map.

Table 7: Collaboration Patterns and Associated Citation Metrics, IJMR (2014–2024)

Collaboration Type	Share (%)	Publications	Citations	CPP	FWCI
International Collaboration	8.8	242	4,000	16.5	0.90
National Collaboration (multi-institution, India)	37.3	1,024	13,754	13.4	0.66
Institutional Collaboration (single institution)	43.3	1,189	15,002	12.6	0.56
Single Authorship	10.0	274	2,615	9.5	0.54

Funding Landscape

Table 8 presents the ten principal funding sponsors identified from Scopus acknowledgement data. ICMR dominated by a wide margin, with 249 funded documents — more than seven times the contribution of the next-ranked sponsor — confirming the Council's position as not only the journal's publisher but also the overwhelmingly dominant funder of its content. The Ministry of Health and Family Welfare (33 documents), the Department of Health Research, India (32), the Department of Biotechnology, Ministry of Science and Technology (30), and the Department of Science and Technology (27) collectively account for a further 122 funded documents, reinforcing the state-driven character of India's biomedical research infrastructure.

The Science and Engineering Research Board (19 documents) and NHMRC of Australia (19) are jointly fifth in the ranking. The presence of NHMRC — Australia's primary biomedical research funding body — reflects sustained international collaborative projects, particularly in infectious disease epidemiology and parasitology, where joint Australian–Indian programmes have a long history. AIIMS (17), the Department of Biotechnology, Government of West Bengal (17), and CSIR (12) complete the top ten. It should be noted that these figures substantially undercount the true funded proportion of IJMR's output, as Scopus funding acknowledgement data are self-reported by authors and known to be systematically incomplete.

Table 8: Top 10 Funding Sponsors of IJMR-Indexed Research (2014–2024)

Funding Sponsor	Documents
Indian Council of Medical Research (ICMR)	249
Ministry of Health and Family Welfare	33
Department of Health Research, India	32
Department of Biotechnology, MoST, India	30
Department of Science & Technology, MoST, India	27
Science and Engineering Research Board	19
National Health and Medical Research Council (Australia)	19
All-India Institute of Medical Sciences	17
Department of Biotechnology, Govt. of West Bengal	17
Council of Scientific & Industrial Research, India	12

DISCUSSION

This study provides a multidimensional scientometric portrait of IJMR across an eleven-year period encompassing the COVID-19 pandemic, significant shifts in India's national health research priorities, and deepening integration into global biomedical science networks. The findings are discussed below in relation to the extant literature, with attention to their implications for editorial strategy and research policy.

6.1 The FWCI Deficit and Its Structural Determinants

The overall FWCI of 0.62 indicates that IJMR publications attract citation rates approximately 38% below the world average for documents of equivalent type, year, and field. This citation gap is not unusual among nationally focused biomedical journals whose authorship and readership bases are geographically concentrated. Gupta and Bala (2011) documented an analogous pattern in Indian medicine publications during 1999–2008, attributing below-average citation impact to limited international visibility and the inherently regional scope of much Indian biomedical research. The present analysis confirms that this structural challenge persists across the following decade, with one critical qualification: FWCI for internationally collaborative IJMR papers reaches 0.90 — within 10% of the world average — demonstrating that the journal's content is capable of attracting near-competitive citation recognition when its authorship network extends across national boundaries. The deficit is therefore a feature of collaboration structure rather than of intrinsic research quality, a distinction with direct implications for editorial policy.

6.2 Crisis Publishing and the 2020 FWCI Trough

The 2020 output surge (n = 378; +55.6% over 2019) and simultaneous FWCI trough (0.45) expose a fundamental tension in pandemic-era scientific publishing. As IJMR absorbed an exceptional volume of COVID-19 submissions — many as rapid communications, brief reports, and correspondence — the aggregate proportion of high-citation document types declined. Brief communications and notes, which constitute a disproportionate share of crisis-period output, attract systematically fewer citations than full research articles and systematic reviews; their dilutive effect on aggregate FWCI is therefore predictable and documented in the bibliometric literature. The high FWCI achieved by the Clinical Insights into COVID-19 Patient Outcomes topic (1.91) confirms that IJMR's most analytically substantive pandemic papers did attain above-world-average impact — the aggregate metric obscures within-cohort heterogeneity. The post-2020 output decline and the FWCI recovery visible in 2022 (0.79) are consistent with a deliberate return to editorial selectivity, and suggest that the journal's editorial leadership has effectively managed the transition from crisis-mode to normalised publishing.

6.3 Institutional Concentration, Diversity, and Policy Implications

The concentration of output and impact within ICMR and a small cluster of premier government and academic institutions — AIIMS New Delhi, PGIMER Chandigarh, Christian Medical College Vellore, and JIPMER Puducherry — raises substantive questions about the breadth and representativeness of IJMR's author pool. ICMR-affiliated publications achieve the highest institutional FWCI (0.90), confirming that the concentration reflects structural access to high-quality research infrastructure rather than a quality ceiling at the institutional level. The implication is that diversifying the contributing author base — to include state medical universities, private research institutions, and district-level health research centres that are currently underrepresented — could expand the thematic range and geographic representativeness of IJMR's output without compromising citation performance, provided that such diversification is supported by targeted capacity-building investments. This recommendation aligns with the Indian science policy literature's consistent calls for research capacity building beyond apex institutions (Dhawan et al., 2024).

6.4 Thematic Positioning: Pandemic Responsiveness and Tropical Disease Niche

IJMR's thematic profile, as characterised by SciVal Topic Prominence Percentiles, reveals a journal operating simultaneously at two strategic registers. In the pandemic register, IJMR responded rapidly and at the frontier of global research momentum, achieving the highest prominence percentiles in its dataset (>99th percentile for two COVID-19 topics) and above-world-average FWCI for its most substantive clinical outputs (1.91 for COVID-19 patient outcomes). In the endemic disease register, IJMR maintains a globally distinctive niche — one where its sustained, multi-decade depth of publication is difficult for other journals to replicate. Scrub typhus is the most instructive example: the combination of FWCI = 1.01 and TPP = 89.23 means that IJMR simultaneously achieves above-world-average citation impact and places its content within a globally prominent research topic — a dual distinction that positions the journal as a world reference point in this neglected tropical disease. A comparable niche exists for leprosy management (FWCI = 0.86; TPP = 90.80) and tuberculosis treatment resistance (TPP = 94.08), the latter representing India's highest-burden infectious disease challenge.

The emergence of the One Health Framework topic (TPP = 98.55) signals a strategically important opportunity. The convergence of human, animal, and environmental health is a defining agenda of twenty-first century biomedical science, and IJMR's depth in zoonotic and vector-borne disease research positions it uniquely to contribute foundational evidence to this interdisciplinary framework. Actively commissioning One Health-oriented research — particularly studies integrating epidemiological, veterinary, and environmental surveillance data — could extend IJMR's international visibility into new disciplinary communities while building on existing strengths.

6.5 Collaboration Structure as a Lever for Citation Impact

The 61% FWCI advantage of internationally collaborative publications over single-institution publications (0.90 vs. 0.56) is the most policy-relevant finding in this dataset. The gradient is monotonic across collaboration modes — from single authorship (0.54) through institutional collaboration (0.56) and national collaboration (0.66) to international collaboration (0.90) — suggesting that citation impact scales consistently with the geographic breadth of the co-authorship network. This pattern replicates findings from the broader bibliometric literature on Indian medical research (Gupta & Bala, 2011) and from global studies of the collaboration–citation relationship (Szomszor et al., 2021). The co-authorship network map (Figure 4) and keyword co-occurrence map (Figure 5) together illustrate the current structural boundaries of IJMR's international engagement and may identify underutilised partnership opportunities, particularly with high-impact low-volume contributors such as Canada and the United Kingdom.

Translating this finding into editorial practice requires active intervention rather than passive openness to international submissions. Concrete strategies include embedding international co-investigator requirements into ICMR-funded multicentre surveillance trials, formalising submission partnerships with WHO collaborating centres for disease-specific topics, establishing a fast-track international collaboration pathway for jointly authored papers from Indian diaspora researchers, and inviting targeted reviews and meta-analyses from international specialists in IJMR's niche disease areas.

MAJOR FINDINGS

The scientometric analysis of IJMR (2014–2024) yields the following principal findings:

IJMR produced 2,745 Scopus-indexed documents accumulating 35,371 citations over eleven years. Annual output peaked at 378 documents in 2020 (COVID-19 surge; +55.6% over 2019) before declining to 167 in 2024, consistent with a return to pre-pandemic editorial norms.

Original articles dominated output (54.0%), followed by Notes (17.6%) and Reviews (16.3%). The high share of Notes and Letters reflects IJMR's tradition of rapid

scientific communication, while two retracted documents (0.07%) confirm active post-publication quality oversight.

The overall FWCI of 0.62 reflects a 38% citation deficit relative to the world average — a structural consequence of the journal's geographically concentrated authorship and readership, not a marker of intrinsic quality limitations. The 2020 FWCI trough (0.45) is explained by the dilutive effect of high-volume crisis publishing, while the 2018 and 2022 peaks (0.80 and 0.79, respectively) demonstrate the journal's capacity for near-world-average impact in years of heightened editorial selectivity.

ICMR was the pre-eminent institutional contributor (548 publications; FWCI = 0.90, the highest of any institution), followed by AIIMS New Delhi (270). All nine leading authors are India-based; Gangakhedkar R.R. (FWCI = 1.90) and Murhekar M.V. (FWCI = 1.85) are the only top-nine contributors to exceed the world-average citation impact threshold.

India accounted for 75.4% of total authorship. Among the top ten contributing countries, only the United Kingdom (FWCI = 1.11) and Canada (FWCI = 1.58) exceeded the world-average FWCI — with Canada achieving the highest FWCI of any listed country despite contributing just 15 publications.

Scrub typhus is the uniquely distinguished topic in IJMR's portfolio: the only thematic cluster in which the journal simultaneously achieves above-world-average citation impact (FWCI = 1.01) and very high global prominence (TPP = 89.23). Two COVID-19 topics exceeded the 99th Topic Prominence Percentile, confirming IJMR's role at the frontier of the most globally researched scientific area of the decade.

International collaboration accounts for only 8.8% of IJMR's output but generates the highest FWCI (0.90) and CPP (16.5) of any collaboration mode — a 61% FWCI advantage over single-institution publishing. The FWCI gradient is monotonic across all four collaboration modes, identifying international co-authorship as the single most actionable lever for improving the journal's global citation competitiveness.

ICMR funded 249 documents — more than seven times the contribution of the next-ranked sponsor — confirming the state-driven nature of India's biomedical research infrastructure. Australia's NHMRC (19 funded documents) is the only non-Indian funder in the top ten, reflecting sustained bilateral collaborative programmes in infectious disease.

CONCLUSION

This scientometric analysis of the Indian Journal of Medical Research for 2014–2024 constitutes the most methodologically comprehensive portrait of the journal's scholarly output available in the literature. The findings collectively affirm IJMR's enduring centrality to Indian biomedical research dissemination while identifying specific, evidence-based pathways for improving its global citation competitiveness.

The journal's overall FWCI of 0.62 reflects the predominantly domestic character of its authorship and citation networks. That internationally collaborative papers approach the world average (FWCI = 0.90) confirms that the quality of IJMR's content is not the binding constraint — its collaboration structure is. The 61% FWCI advantage of internationally co-authored publications over single-institution publications is unambiguous in its policy implication: institutionalising international co-authorship, through embedded collaborative requirements in ICMR-funded multicentre studies, WHO partnership frameworks, and diaspora researcher engagement programmes, is the most readily actionable lever for sustained improvement in IJMR's global citation impact.

Thematically, IJMR operates from a position of genuine global distinction. Its sustained contributions to scrub typhus, leprosy, and tuberculosis research — topics where few global journals can match its depth — represent competitive advantages that should be actively leveraged through targeted commissioning of high-impact reviews, collaborative surveillance studies, and thematic special issues. The One Health framework (TPP = 98.55) represents the most compelling strategic growth opportunity: the journal is exceptionally well positioned, by virtue of its infectious disease expertise and its ICMR affiliation, to contribute foundational interdisciplinary evidence at the human–animal–environment interface.

Three priority actions are recommended for editorial leadership and ICMR policymakers: (1) institutionalise international co-authorship in funded multicentre trials and surveillance networks; (2) expand the contributing author pool beyond apex institutions to state medical universities, private research bodies, and district-level health research centres; and (3) prioritise full-length, methodologically rigorous research articles and systematic reviews in high-prominence thematic areas over brief communications — as these document types consistently generate superior normalised citation impact.

Future research should extend this analysis beyond 2024 as citation accumulations for recent cohorts mature; compare IJMR's performance systematically with analogous national biomedical journals in other large middle-income countries (notably Brazil's Memórias do Instituto Oswaldo Cruz and China's Chinese Medical Journal); and

incorporate altmetric, policy citation, and social media attention data to capture the societal impact of IJMR's output beyond the academic citation universe.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

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REFERENCES

Chaman Sab, M., Mueen Ahamed, K. K., & Bagalkoti, V. (2025). A website review of AD Scientific Index: Evaluating its methodology, applications, and impact on research assessment. *Journal of Data Science, Informetrics, and Citation Studies, 4*(1), 115–120. https://doi.org/10.5530/jcitation.20250169

Dhawan, S. M., Gupta, B. M., Mamdapur, G. M. N., Walke, R., & Bansal, M. (2024). Bibliometrics research in India: A quantitative and qualitative assessment of publications during 2014–23. *Journal of Data Science, Informetrics, and Citation Studies, 3*(2). https://doi.org/10.5530/jcitation

Giri, R., & Das, A. K. (2023). The *Journal of Scientometric Research*: A statistical outlook of the first eleven volumes. *Journal of Scientometric Research, 12*(3), 739–754. https://doi.org/10.5530/jscires.12.3.070

Gupta, B. M., & Bala, A. (2011). A scientometric analysis of Indian research output in medicine during 1999–2008. *Journal of Natural Science, Biology and Medicine, 2*(1), 87–100. https://doi.org/10.4103/0976-9668.82313

Gupta, B. M., Mamdapur, G. M. N., Ali, K. S., Ahmed, K. K. M., Bansal, M., & Kappi, M. (2024). Pakistan's contribution to COVID-19 research: A scientometric analysis of publications from 2020–2023. *Journal of Data Science, Informetrics, and Citation Studies, 3*(3). https://doi.org/10.5530/jcitation

Indian Journal of Medical Research. (2025). *About the journal*. ICMR. https://ijmr.org.in

Koley, S. (2024). Dr. Abed Chaudhury, Bangladeshi-Australian gene scientist: A scientometric portrait. *Journal of Data Science, Informetrics, and Citation Studies, 3*(3), 317–336. https://doi.org/10.5530/jcitation.3.3.32

Koley, S. (2026). Author productivity and Lotka's law in nursing research output as mirrored in the *Nursing Journal of India*, 2010–2024. *Journal of Data Science, Informetrics, and Citation Studies, 4*(3), 296–308. https://doi.org/10.5530/jcitation.20250186

Manoj Kumar, L., George, R. J., & Anisha, P. S. (2022). Bibliometric analysis for medical research. *Indian Journal of Psychological Medicine, 44*(3), 220–227. https://doi.org/10.1177/02537176221103617

Mondal, D. (2025). Research output and impact in data science and informetrics: A bibliometric study of JDSICS (2022–2024). *Journal of Data Science, Informetrics, and Citation Studies, 4*(3), 325–331. https://doi.org/10.5530/jcitation.20250202

Patralekh, M. K., Vaish, A., Vaishya, R., Gulia, A., & Lal, H. (2021). Trends of publication in the orthopaedic journals from India: A bibliometric analysis. *Indian Journal of Medical Sciences, 73*(1), 134–140. https://doi.org/10.25259/IJMS_39_2021

Sarode, A. R., & Khaparde, V. S. (2026). Scientometric portrait of Dr. S.V. Kamat: A distinguished defence and material scientist. *Journal of Data Science, Informetrics, and Citation Studies, 4*(3), 387–399. https://doi.org/10.5530/jcitation.20250250

Szomszor, M., Adams, J., Fry, R., Pendlebury, D. A., Potter, R. W. T., & Rogers, G. (2021). Interpreting bibliometric data. *Frontiers in Research Metrics and Analysis, 5*, Article 628463. https://doi.org/10.3389/frma.2020.628463

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics, 84*(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

Zanotto, E. D., & Carvalho, V. (2021). Article age- and field-normalized tools to evaluate scientific impact and momentum. *Scientometrics, 127*, 2911–2929. https://doi.org/10.1007/s11192-021-03877-3

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