

# Dermatology journals from India: A critical appraisal of the journal metrics

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## Abstract

**Background:** Bibliometrics refer to documents and citation-based measures that measure different aspects of performance of a journal, including impact, output and prestige.

**Objectives:** The aim of this study was to collect bibliometric data of various Indian dermatology journals as well as Indian journals from other disciplines, in order to compare relative performances.

**Methods:** Journal metrics pertaining to various Indian journals, both from dermatology [Indian Journal of Dermatology, Venereology and Leprology (IJDVL), Indian Journal of Dermatology (IJD), Indian Dermatology Online Journal, Indian Journal of Pediatric Dermatology and International Journal of Trichology] and other disciplines [Indian Journal of Medical Research (IJMR), Indian Journal of Pediatrics (IJP), Indian Journal of Ophthalmology and Indian Journal of Pharmacology] were sought. Data pertaining to the following 8 metrics during the year 2021 was collected: Journal Impact factor, SCImago Journal Rank, h5-index, Eigenfactor score and normalized Eigenfactor Score, Journal Citation Indicator, Scimago Journal and Country Rank H-index, CiteScore and Source Normalized Impact per Paper.

**Results:** Among Indian dermatology journals, for the year 2021, IJDVL had the highest impact factor (2.217) and h-index (48). IJD led in terms of prestige metrics such as SCImago Journal Rank (0.403), Eigenfactor score (0.00231) and Source Normalized Impact per Paper (1.132). IJDVL underperformed with respect to an average dermatology journal on all three prestige metrics. Among selected journals from other disciplines, two (IJMR and IJP) had impact factor exceeding five, despite lagging behind IJDVL two years ago. Most had normalized scores exceeding 1, indicating better performance than an average journal from their respective fields.

**Limitations:** Non-inclusion of altmetrics related data

**Conclusion:** IJDVL is one of the leading Indian journals in the field of dermatology, followed closely by IJD. A rise in IJDVL influence is evident over the past decade, as evident by various metrics. However, the progress still trails behind the average of global dermatology journals as evident by the field-normalized journal metrics, indicating potential for further growth of journal influence.

**Key words:** CiteScore, Eigenfactor score, h5-index, Journal Citation Indicator, Journal Impact factor, Indian Dermatology Online Journal, Indian Journal of Dermatology, Venereology and Leprology, Indian Journal of Dermatology, Normalized Eigenfactor Score, Scimago Journal and Country Rank H-index, SCImago Journal Rank, Source Normalized Impact per Paper

## Plain Language Summary

Indian Journal of Dermatology, Venereology and Leprology (IJDVL) is among the leading dermatology journals of India. Researchers aim to publish their work in reputed journals, and the standing of a journal is measured in terms of bibliometrics. These measure different aspects of performance of a journal, including impact, output and prestige. This study compared

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standings of various Indian journals, both from dermatology and other fields. IJDVL was the leading Indian dermatology journal in terms of impact factor and h-index, however another Indian dermatology journal, Indian Journal of Dermatology (IJD) led in terms of metrics such SCImago Journal Rank, Eigenfactor score and Source Normalized Impact per Paper. Several Indian journals from other fields (medicine and pediatrics) were observed to have a superior performance than an average journal from their respective fields. While IJDVL is among the leading Indian journals in the field of dermatology, the progress lags the average of global dermatology journals. This indicates potential for further growth of journal influence in the coming years.

## Introduction

Indian Journal of Dermatology, Venereology and Leprology (IJDVL) was first established in 1940 and is an open access, peer reviewed journal published bimonthly by Indian Academy of Dermatologists, Venereologists and Leprologists (IADVL). IJDVL was briefly the highest ranking scholarly Indian journal, based on Journal Impact Factor (JIF).<sup>1</sup> Indian Journal of Dermatology (IJD) was first published in 1955, and became the first Asian dermatology journal to be indexed in 1965. It is an open access journal published by West Bengal branch of IADVL. International Journal of Trichology, Indian Journal Online Journal (IDOJ) and Indian Journal of Pediatric Dermatology (IJP) are also open access, peer reviewed Indian dermatology journals, established relatively recently in 2009, 2010 and 2013, respectively. Besides these five mainstream journals, there are at least ten more journals in the field of Dermatology published by states or national associations from India.

A recent article discussed the scientometric analysis of IJDVL, however the analysis was entirely based on a single journal metric—JIF.<sup>2</sup> Use of JIF as the sole metric has been criticized among the academic community.<sup>3</sup> It is doubtful whether impact factor measures the quality or just the

quantity of publications. Self-citation, increased number of review articles, inclusion of letters and editorials in numerator but not the denominator may falsely inflate the impact factor of a journal. Further, impact factor is not comparable among journals from different disciplines.

The aim of this study was to collect bibliometric data of various mainstream Indian dermatology journals as well as Indian journals from other disciplines, in order to compare relative performances.

## Materials and Methods

Journal metrics pertaining to various Indian journals, both from dermatology (IJDVL, IJD, IDOJ, IJP and IJT) and other disciplines (Indian Journal of Medical Research (IJMR), Indian Journal of Pediatrics (IJP), Indian Journal of Ophthalmology (IJO) and Indian Journal of Pharmacology) were sought. Preference was given to journals listed in more databases. Data pertaining to the following 8 metrics during the year 2021 was collected: 2-year JIF, SCImago Journal Rank (SJR), h5-index, Eigenfactor score and normalized Eigenfactor Score, Journal Citation Indicator (JCI), Scimago Journal and Country Rank H-index, CiteScore and Source Normalized Impact per Paper (SNIP) [Table 1].

**Table 1: Definition of various journal metrics included**

Journal metric	Definition	Source
Journal Impact factor	Citations received by a journal during a certain time period, divided by the total number of citable items (articles and reviews) published in the journal during the same time period	Web of Science
SCImago Journal Rank (SJR)	A metric that “weights each incoming citation to a journal by the SJR of the citing journal, with a citation from a high-SJR source counting for more than a citation from a low-SJR source.”	Scopus
Google scholar h5-index	h-index for articles published in the last 5 complete years. It is the largest number $h$ such that $h$ articles published in 2017–2021 have at least $h$ citations each	Google scholar
Eigenfactor score	Based on the number of times articles from the journal published in the past five years have been cited in the Journal citation report year, but it also considers which journals have contributed these citations so that highly cited journals will influence the network more than lesser cited journals. Normalized Eigenfactor Score is the Eigenfactor score normalized, by rescaling the total number of journals in the JCR each year, so that the average journal has a score of 1.	Web of Science
Journal Citation Indicator	Provides a field-normalized measure of citation impact where a value of 1.0 means that, across the journal, published papers received a number of citations equal to the average citation count in that subject category	Web of Science
Scimago Journal and Country Rank H-index	Journal’s number of articles ( $h$ ) that have received at least $h$ citations	Scopus
CiteScore	Counts the citations received in 2018–2021 to articles, reviews, conference papers, book chapters and data papers published in 2018–2021, and divides this by the number of publications published in 2018–2021	Scopus
Source Normalized Impact per Paper	Each journal’s citations per publication with the citation potential of its field, defined as the set of publications citing that journal.	Scopus

JIF, JCI, Eigenfactor score and normalized Eigenfactor Score were obtained from Clarivate Journal Citation Reports through Web of Science. The h5-index and H-index were recorded from Google Scholar and Scimago Journal and Country Rank database, respectively. SJR, CiteScore and SNIP were obtained from Scopus. Web of Science database was accessed through the institutional library, rest of the indices were downloaded from the internet. Data pertaining to all indices was collected on December 8, 2022.

## Results

Among dermatology journals, data pertaining to all 8 metrics was available only for IJDVL and IJD [Table 2]. All metrics were available for selected journals from other disciplines [Table 3].

### Journal impact factor

Among Indian dermatology journals, JIF for the year 2021 was available only for IJDVL and IJD, with comparable impact factors of 2.217 and 1.757, respectively. In the year 2009, IJDVL ranked 40/48 among dermatology journals. Its immediate companions were Journal of Dermatology and Australasian Journal of Dermatology ranking 39 and 41 among the 48 indexed dermatology journals at the time. Impact factor of all three journals has risen steadily in the past decade [Figure 1a]. Currently however IJDVL trails behind both these journals with a ranking of 44/69 in 2021, compared to 22/69 and 40/69 for Journal of Dermatology and Australasian Journal of Dermatology, respectively.

Among the 332 Indian Journals listed in Clarivate during the year 2022, IJDVL currently ranks 17, compared to the rank 5/72 in the year 2009. Figure 1b represents the trends

in impact factors of five Indian journals from various disciplines which had an impact factor similar to IJDVL during the year 2009. During the period between 2015–2019, IJDVL was among the highest-ranking Indian Journals, however the impact factor has declined during the past two years.

### SCImago journal rank

In terms of SCImago ranking, IJDVL currently ranks 82 among the 139 dermatology journals, occupying a place in the third quartile with a SJR of 0.321. Interestingly, two of the Indian dermatology journals with a lower impact factor, namely IJD and IJT, have a higher SJR score of 0.403 and 0.472, respectively.

A crucial advantage of SJR is allowing comparison between journals of various disciplines. IJMR is among Indian journals with highest SJR, with a SJR index of 0.907. IJP, IJO and Indian Journal of Pharmacology have SJR index of 0.699, 0.750, and 0.400, respectively.

### h5-index

Among Indian dermatology journals, IJD has the highest h5-index of 28, followed closely by IJDVL with a h5-index of 26. H5-index of IDOJ and IJT are 23 and 18, respectively. Among Indian journals of other disciplines, IJP has a h5-index of 34, IJMR 48, Indian Journal of Pharmacology 21 and IJO 46.

### Eigenfactor score

Eigenfactor Score of IJDVL is 0.00175, with a normalized Eigenfactor Score of 0.37746. IJD has a higher Eigenfactor score of 0.00231, with a normalized Eigenfactor Score of

**Table 2: Comparative analysis of journal metrics among Indian Dermatology Journals**

	JIF	SJR	H5 index	Eigenfactor	JCI	H-index	Cite score	SNIP
Indian Journal of Dermatology, Venereology and Leprology	<b>2.217</b>	0.321	26	0.00175	0.50	<b>48</b>	2	0.767
Indian Journal of Dermatology	1.757	0.403	<b>28</b>	<b>0.00231</b>	<b>0.53</b>	40	1.8	<b>1.132</b>
Indian Dermatology Online Journal	-	-	23	0.00149	0.49	-	0.1	-
Indian Journal of Pediatric Dermatology	-	-	18	0.00014	0.09	-	-	-
International Journal of Trichology	-	<b>0.472</b>	11	-	-	25	<b>2.8</b>	0.916

Highest values in each column are highlighted in bold

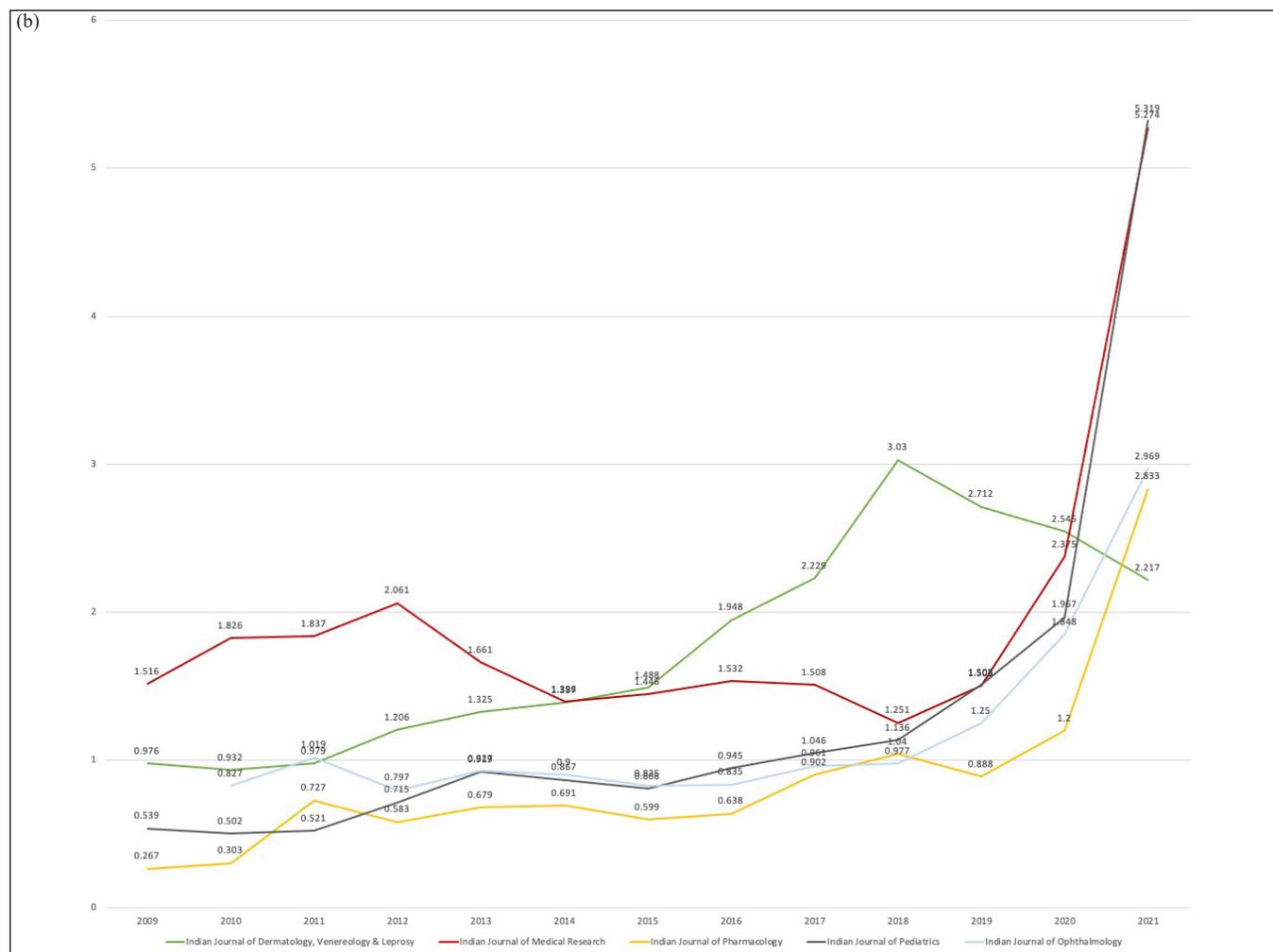
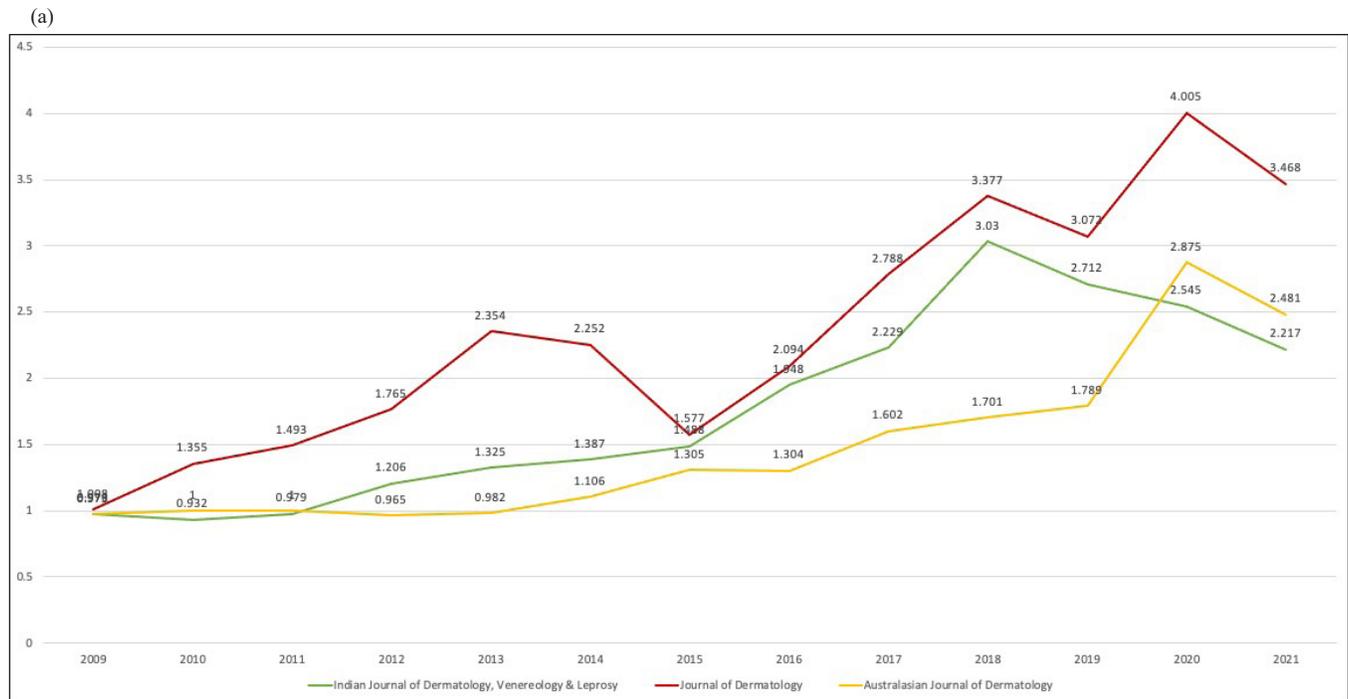
JCI: Journal Citation Indicator, JIF: Journal Impact factor, SJR: SCImago Journal Rank, SNIP: Source Normalized Impact per Paper

**Table 3: Comparative analysis of journal metrics among Indian journals from various disciplines**

	JIF	SJR	H5 index	Eigenfactor	JCI	H-index	Citescore	SNIP
Indian Journal of Dermatology, Venereology and Leprology	2.217	0.321	26	0.00175	0.5	48	2	0.767
Indian Journal of Medical Research	5.274	<b>0.907</b>	<b>48</b>	0.00702	0.63	<b>91</b>	3.1	1.499
Indian Journal of Pediatrics	<b>5.319</b>	0.699	34	0.00495	<b>1.21</b>	55	<b>5.6</b>	<b>1.523</b>
Indian Journal of Ophthalmology	2.969	0.75	46	<b>0.00743</b>	0.85	59	2.9	1.272
Indian Journal of Pharmacology	2.833	0.4	21	0.00124	0.44	62	2.7	0.664

Highest values in each column are highlighted in bold

JCI: Journal Citation Indicator, JIF: Journal Impact factor, SJR: SCImago Journal Rank, SNIP: Source Normalized Impact per Paper



**Figure 1:** (a) Impact factor trends of three dermatology journals with nearly identical impact factor in 2009 (b) Impact factor trends of five Indian journals from different disciplines.

0.49780. Eigenfactor Score of IDOJ is 0.00149, with a normalized Eigenfactor Score of 0.32188.

Among Indian journals from other disciplines, IJP has normalized Eigenfactor score of 1.06499, IJMR 1.51038 and IJO has a normalized score of 1.59918. A normalized score higher than 1 indicates that these journals are performing better than an average journal from their respective fields.

#### Journal CITATION Indicator (JCI)

JCI of IJDVL for the year 2021 is 0.50, indicating 50% lesser impact compared to an average dermatology journal, with a JCI rank of 60 among 93 dermatology journals. IJD has a JCI of 0.53, with a rank of 56/93. IDOJ has a JCI of 0.49 and ranks right after IJDVL at 61.

IJP has a JCI of 1.21, ranking 26 among 184 pediatric journals. IJMR has a JCI of 0.63 and ranks 83/329 among medicine journals. Indian Journal of Pharmacology and IJO have a JCI of 0.44 and 0.85, respectively.

#### Scimago journal and country rank H-index

IJDVL's H-index of 48 is the highest among dermatology journals from India. H-index of IJD and IJT are 40 and 25, respectively. IJMR's h-index of 91 is the highest among all Indian journals. Indian Journal of Pharmacology, IJO and IJP have h-index of 62, 59 and 55, respectively.

#### Citescore

Among Indian Dermatology Journals, IJT has the highest CiteScore (2.8), followed by IJDVL (2.0), IJD (1.8) and IDOJ (0.1). Indian Journal of Pharmacology has a CiteScore of 2.7, IJP 5.6, IJO 2.9 and IJMR 3.1.

#### Source Normalized Impact per Paper (SNIP)

IJDVL has a SNIP of 0.767, lower than IJD with a SNIP of 1.132. IJP, IJO, Indian Journal of Pharmacology and IJMR have SNIP of 1.523, 1.272, 0.664 and 1.499, respectively.

## Discussion

With the rapid rise in number of peer-reviewed journals, authors face an immense challenge when choosing a journal to publish their work. Selection of a journal for submission involves several considerations, such as journal influence, indexing status, article processing time and policies for authors, etc. A prior publication discussed the turnover time among dermatology journals, which was significantly longer among those of Indian origin.<sup>4</sup> The present study evaluates the bibliometric data of key Indian dermatology journals and attempts to evaluate their growth relative to journals of other disciplines in India.

With increase in average size of bibliography of various publications, an inflation of impact factor scores over time has been noted across all fields.<sup>5</sup> An aggregated JIF increase of 70% has been noted among dermatology journals during the two decades between 1997 and 2017. In comparison, over 200% growth in impact factor attained by IJDVL over

13 years (from 0.976 in 2009 to 2.217 in 2021) is certainly commendable.<sup>6</sup>

Prestige metrics refers to bibliometrics that measure the quality of a journal by taking into account the origin of citations.<sup>7</sup> For example, a citing source with higher prestige score is assigned greater value as compared to a source with lower score. These include SJR, Eigenfactor scores and SNIP. Interestingly, IJD ranks higher than IJDVL in terms of all three-prestige metrics.

Normalized metrics are those that are normalized as per rate of citations in a particular subject area. These include normalized Eigenfactor score, SNIP and JCI. These are graded in such a way that an average journal in a subject category has a score of 1. IJDVL, with a normalized Eigenfactor Score of 0.37746, SNIP of 0.767 and JCI of 0.50, underperformed with respect to an average dermatology journal as per all three metrics in 2021.

Compared to Indian journals from other disciplines, IJDVL observed a surge in impact factor during 2015–2019, when it ranked highest among Indian journals. A decline has since been observed over the past two years. Conversely, JIF of IJMR and IJP has risen steeply in the last two years. Whether this surge will be sustained remains to be seen.

However, impact factor is not a good measure to compare journals across disciplines. Normalized journal level metrics are better suited for interdisciplinary comparisons. As per SJR, which has a maximum possible score of 1, IJDVL currently lies in the third quartile among dermatology journals. IJMR ranks among first quartile and IJP and IJO both lie in second quartile of their respective disciplines. Similarly, with Normalized Eigenfactor Score higher than 1, both IJMR and IJP are performing better than the average journals in their fields.

A major strength of Indian dermatology journals is open access and free to publish model, likely resulting in widespread dissemination of knowledge. Altmetrics are metrics that quantify usage and discussion of journal articles around the world, including websites, blogs, social media, news, etc. Open access articles are known to have higher altmetric scores, and Indian journals may be outperforming average dermatology journals as per these metrics.<sup>8</sup> A limitation of our study is non-inclusion of altmetric-related data, as they are not available freely in the public domain.

## Conclusion

We conducted a detailed bibliometric analysis of key dermatology journals from India to objectively assess their average bibliometrics and to ascertain if the growth of our speciality journals have kept pace with other Indian journals. Although a meteoric rise has been observed in the impact factor of IJDVL, which is the leading journal of IADVL, this impression is not borne out by other metrics. These indices (other than JIF) suggest that IJDVL is currently trailing behind other main dermatology journals from India and global

dermatology journals, indicating potential for further growth of journal influence. Other mainstream dermatology journals from India like IJD and IDOJ should also take this opportunity of their rising metrics to excel further.

### Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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