

A Comparative Analysis of Physical Medicine and Rehabilitation Journals' Metric Performance

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Journal metrics and citation counts are frequently used to demonstrate scholarly output and value. The Impact Factors (IFs) from Clarivate Analytics' Journal Citation Reports (JCR) are commonly used as the expected or standard metric to demonstrate journal merit. However, the nature of the field of Physical Medicine and Rehabilitation (PM&R) leads citation counts to be low, thus translating to low IFs. It can be challenging for those publishing in the field of PM&R to demonstrate value when this metric is expected to be high. In December 2016, Elsevier announced their CiteScore metrics. Like Impact Factors, CiteScore is a journal level metric and could be a viable alternative for demonstrating the importance of PM&R journals. This comparison explores some major differences between these two metrics and how PM&R journals are represented in them in order to determine whether one metric is more advantageous than the other for those publishing in the field of PM&R. For this analysis, all metric data was extracted from both JCR and CiteScore in April 2017. Only the 2015 JCR and CiteScore reports were considered. Only PM&R categories that explicitly used the term "Rehabilitation" in their title were included in this analysis.

CiteScore Metrics by Scopus

InCites Journal Citation Reports

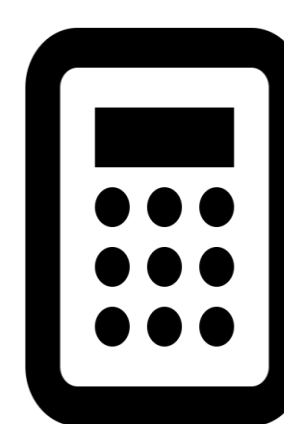
CiteScore Metrics by Scopus were launched in December 2016 and are updated monthly. Access to CiteScore does not require Scopus access. Metrics are available for most active serial titles (journals, book series, conference proceedings and trade journals) in Scopus that started publishing in 2014 or earlier.



Journal Citation Reports are a module within the InCites research analytics tool produced by Clarivate Analytics (formerly Thompson Reuters). Published annually since 1975, JCR are integrated in Web of Science and only available to subscribers. JCR includes their proprietary metric, Impact Factors (IF). Available only for journals in the Science Citation Index-Expanded (SCIE) and the Social Sciences Citation Index (SSCI).

The CiteScore metric is calculated as all citations divided by the number of articles (including front matter as well as research articles). It is based on documents published in the past two years.

$$\text{CiteScore} = (C_F + C_R) / (N_F + N_R)$$



The Impact Factor is calculated as all citations divided by the number of research articles. Based on citations made in a given year to documents published in the past three years.

$$\text{Impact Factor} = (C_F + C_R) / N_R$$

Two explicitly PM&R categories:

- *Rehabilitation* (105 journals)
 - *Physical Therapy, Sports Therapy and Rehabilitation* (160 journals)
- There are a total of **215 unique journals** between both categories (50 duplicates).

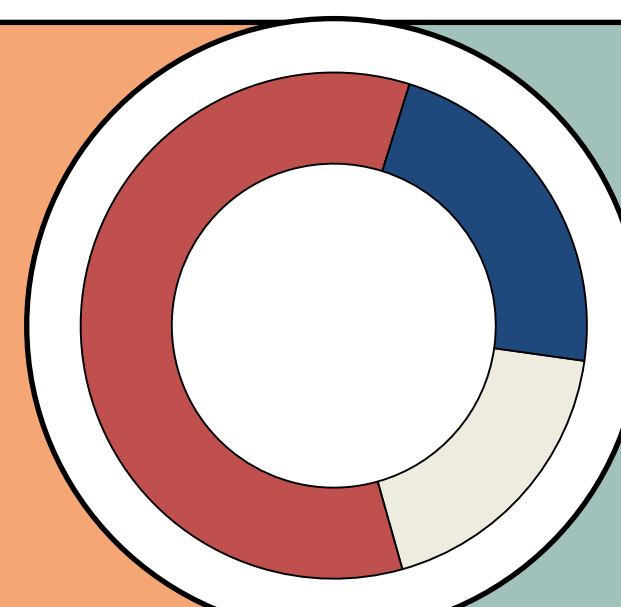
PM&R Categories

Two explicitly PM&R categories:

- *Rehabilitation* in SSCI (71 journals)
 - *Rehabilitation* in SCIE (65 journals)
- There are a total of **113 unique journals** between both categories (23 duplicates).

Of the 215 journals included in these categories, **164 journals** are listed in Scopus PM&R CiteScore categories, but not JCR:

- 103 of these were not listed in a non-PM&R JCR category
- 2 were listed in JCR prior to 2015



Of the 133 journals included in these categories, **62 journals** are listed in JCR PM&R categories, but not CiteScore:

- Only 7 of these were not listed in a non-PM&R InCites category
- There are 51 duplicate journals between JCR and InCites

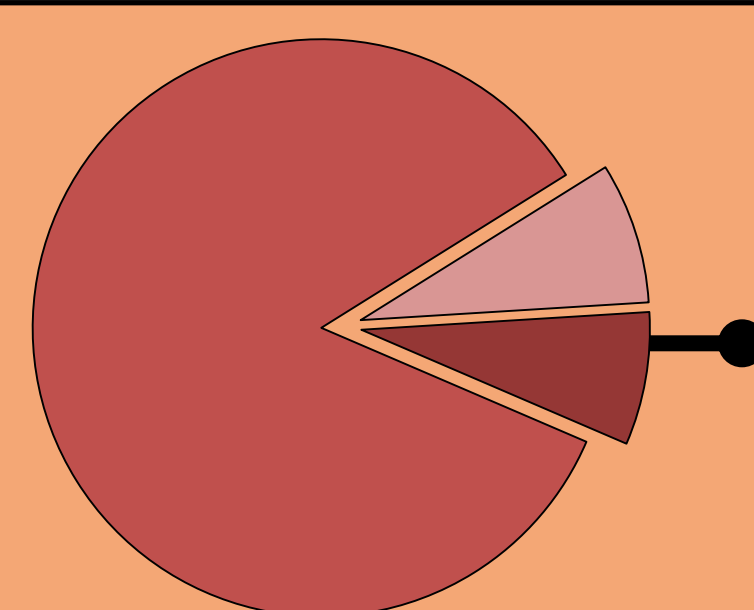
21% of PM&R journals publish non-English language articles (47/215)

- German (10) and Spanish (9) were the most common non-English languages to be considered for publication



4% of PM&R journals publish non-English language articles (5/113)

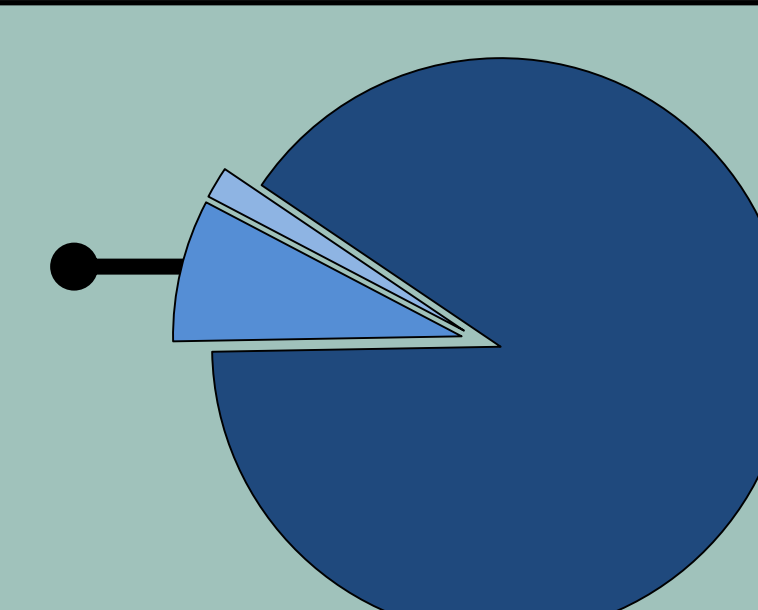
- German (4) was the most common non-English language to be considered for publication, followed by French (1) and Turkish (1)



15% of PM&R journals are listed as Open Access
51% of these are listed in the Directory of Open Access Journals (DOAJ) (17/33)



10% of PM&R journals are listed as Open Access
81% of these are listed in the Directory of Open Access Journals (DOAJ) (9/11)



Demonstrating scholarly output using journal metrics can be challenging for those in the field of PM&R due to a tendency to lower metrics in standard tools like IFs through JCR. In such cases, having another reputable source of journal level metrics could be valuable. Our comparative analysis has determined that the quantity, language variety, and open access options are greater in CiteScore than JCR. However, several open access journals listed in CiteScore could be considered "predatory".

PM&R journals rank slightly higher in CiteScore than in JCR, with journals ranging from 98th-96th percentile in CiteScore, and 91st-83rd percentile in JCR. Although CiteScore is broader in scope, and provides a higher overall ranking for PM&R journals, critical judgement should be used in evaluating the quality of included journals. As a result, we would caution against using this metric alone or instead of IFs.

Top 5 PM&R Journals	CiteScore	Percentile
Sports Medicine	5.82	98 th
American Journal of Sports Medicine	5.12	97 th
Neurorehabilitation & Neural Repair	5.00	97 th
International Journal of Behavioral Nutrition & Physical Activity	4.94	97 th
British Journal of Sports Medicine	4.47	96 th

Top 5 PM&R Journals	IF	Percentile
Neurorehabilitation and Neural Repair	4.035	91 st
Journal of Physiotherapy	4	91 st
Journal of Head Trauma Rehabilitation	3.323	87 th
Archives of Physical Medicine & Rehabilitation	3.045	84 th
Augmentative & Alternative Communication	2.96	83 rd

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