

## Is there any Influence of Journal Impact Factor on the Citation Index of Articles Published in Brazilian Journals with International Scope?

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With the recent disclosure of the journals impact factors of 2014 by Thomson-Reuters, we verified that the Brazilian Archives of Cardiology maintained its Impact Factor (IF) at the same levels observed in recent years, contrary to the expected prospects since the publication of its first index five years ago<sup>1</sup>. A similar situation has also been observed regarding most journals with international scope published in Brazil, despite the many efforts by their editors to attract the publication of the best scientific quality articles, as well as to improve publication editorial quality.

The fact that the IF has remained unchanged represents a significant problem for the national publication journals, as the Brazilian postgraduate courses are the most important suppliers of high-quality works for publication and the main mission of our journals is precisely to facilitate the dissemination of scientific research carried out in our country. As the result of the maintenance of the scoring criteria of postgraduate programs by the Higher Education Personnel Training Coordination (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Capes) of the Ministry of Education, based on the impact factor of journals where our scientists publish their research, a vicious circle is formed, which does not favor the development of our publications.

In a previous editorial, we demonstrated that the publication of articles with better scientific quality by Brazilian authors in the field of Cardiology and Cardiovascular Science occurs primarily in journals published in other countries, a situation justified by the higher impact factor of these journals<sup>2</sup>.

On the other hand, we are currently witnessing the expansion of the scientific research broadcasting in the media through portals of indexers that often bring us access to scientific information even before the official publication in printed form, as well as the easy access to complete articles through electronic libraries. These facts favor the citation of scientific articles primarily based on their scientific and editorial quality or even the credibility of the involved research groups, a situation that makes us consider whether the scientific impact of the work is actually related to the impact factor of the journals where they are published.

### Keywords

Periodicals as Topic; Journal Impact Factor; Portals for Scientific Journals; Bibliometrics.

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Aiming to assess the scientific relevance of articles published by Brazilian authors in journals with international scope published in Brazil and abroad in the field of cardiology, we researched publications of original or review articles carried out over the past five years on the following indexers: "myocardial revascularization," "atrial fibrillation" and "Chagas cardiomyopathy."

Only citations obtained by studies carried out exclusively by Brazilian authors in the "Web of Science" database of Thomson-Reuters were analyzed, as multicenter studies with the participation of national centers are predominantly published in higher-impact factor journals and tend to have a greater impact due to their scope. The identified studies were the ones that received at least one citation during that period and we compared the H indices obtained by articles published in Brazilian journals with those obtained by articles published in international journals, as publication in international journals is usually justified by the higher impact factors of the latter when compared to national ones.

When analyzing the indexer "myocardial revascularization," 207 publications were identified, which received 825 citations in the period, with an H index of 12. Among the 156 studies published in Brazilian journals, 94 (60%) were cited by other publications in the period, with an H index of 10. A similar situation was observed regarding 50 studies by Brazilian authors published in foreign journals, emphasizing the fact that only 29 of these articles (57%) received citations in the period, with an H index of 8. When analyzing the indexer "atrial fibrillation", 177 publications were identified, which received 507 citations in the period, with an H index of 10. The evaluation of the 97 articles published in Brazilian journals showed that 48 (47%) received at least one citation whereas, of the 70 articles published in international journals, 51 (73%) received citations in the literature. In spite of the higher rate of cited articles in international journals, H index values were similar for articles published in Brazilian journals and those published in other countries (8 and 9, respectively).

On the other hand, when evaluating the indexer "Chagas cardiomyopathy", we observed a predominance of publications by Brazilians authors in foreign journals (139), in comparison to only 55 articles published in national publications. The articles published in foreign journals totaled more than 1,500 citations obtained by 113 articles (81%) in the last five years, with an H-index of 17, while only 37 (67%) of the 55 articles published in Brazil received 161 citations, with an H index 6.

The data shown here demonstrate there was no difference regarding citation indexes obtained by articles published in either Brazilian journals or international ones, in a broad area of topics in the field of cardiovascular sciences. However, this situation is not the same with articles that address specific topics such as Chagas cardiomyopathy, of which interest

by international publications of greater impact for the contribution of Brazilian science justifies the higher acceptance rate and citations of these articles.

Unquestionably, Brazilian science should be widely disseminated by several international indexers and by the best journals in each field of knowledge in a balanced manner, especially focusing on the mission and the specific audience of each publication when choosing the vehicle of disclosure<sup>3</sup>.

However, one can conclude, based on the aspects mentioned in this Editorial, that the higher impact factor of foreign journals is not a valid justification for choosing them as a better vehicle of disclosure for Brazilian cardiology science. This situation demonstrates the need to review the evaluation criteria of national scientific production, primarily based on citation indexes obtained by the articles themselves, to stop focusing on the impact factor of foreign journals at the expense of journals published in our own country.

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