Brazilian authors don’t cite Brazilian authors: Nothing has changed since 1994

Os Autores brasileiros não citam os autores brasileiros: Nada mudou desde 1994

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Abstract

Objective To outline the profile of self-citations from Revista Brasileira de Ortopedia (Rev Bras Ortop) and citations of this journal in other medical orthopaedic journals with general or specific content in a knowledge area of the specialty.

Methods This is an observational cross-sectional study of the frequency of self-citations and citations from Rev Bras Ortop in five other medical orthopaedic journals from different countries, all published in English. The last 15 articles published in 2020 in each of the six journals were analyzed. The references used in each of them were evaluated to identify the journal in which they were originally published. The frequency of distribution of the four main journals cited, their position, and the relative percentage to the total number of citations were observed and recorded in each of the six journals. The number of times that the Rev Bras Ortop was cited in each of the selected foreign journals was assessed using its absolute and relative frequencies.

Results The total number of citations evaluated in this study was 2,527 (ranging from 386 to 486 per magazine). Rev Bras Ortop showed a low rate of self-citation (2.6%), being the sixth journal cited in the journal itself (10 out of a total of 386 references).

Keywords ► journal article ► journal impact factor ► peer review ► research ► database

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Introduction

Researching, writing, and disseminating the findings of scientific research are important means of communication in the academic environment. In general, the role of publication has both academic function of informing and communicating the results of the research, and professional function, democratically providing a structured area for the debate of the study findings. In this context, the main function of medical journals is to transmit information that improves health care, publishing scientific articles that focus on issues of great relevance in health practice. However, despite the growing number of scientific publications, allowing to reach a wider audience of readers, the authors face an unprecedented challenge when selecting which journal is the ideal journal to publish their research.

Conclusion

Rev Bras Ortop has a low reference of itself, with a self-citation rate of 2.6% in the studied period, showing that the Brazilian orthopaedic surgeons do not mention the Brazilian orthopaedic surgeon who publishes in the journal. We suggest the elaboration and implementation of strong strategies to improve the journal’s visibility in the world academic-scientific scenario. In addition, it is essential that Brazilian orthopaedic surgeons understand this reality and assist directly and effectively to change this scenario.
In Brazil, Revista Brasileira de Ortopedia (Rev Bras Ortop) is the scientific publishing body of Sociedade Brasileira de Ortopedia e Traumatologia (SBOT). The journal does not receive funding money from funding agencies and is fully supported by SBOT, without charging a fee for submission and publication of its articles. Since 2009 it is indexed in PubMed, PubMed Central, Scopus, SciELO (Scientific Electronic Library On-Line) and LILACS (Latin American Literature in Health Sciences) databases, ensuring good visibility in the world orthopedic scenario. Nevertheless, Lech, in an editorial published in the journal itself in 1994, drew attention to the fact that national authors do not cite Brazilian authors. Nothing has changed since 1994, keeping the journal's number of self-citations low. The aim of this study is to observe the profile of self-citations of Rev Bras Ortop and citations of this journal in other medical journals of orthopedics.

Material and Methods

This is a cross-sectional observational study of the frequency of self-citations and citations of Rev Bras Ortop in other orthopedic medical journals. In addition to Rev Bras Ortop, four other magazines of general scope were chosen within the specialty (The Journal of Bone & Joint Surg American [J Bone Joint Surg Am], Bone & Joint Journal [Bone Joint J], Acta Orthopaedica et Traumatologica Turcica [Acta Orthop Traumatol Turc] and Der Unfallchirurg [Unfallchirurg]) and a journal specific to a knowledge area (Journal of Shoulder & Elbow Surgery [J Shoulder Elbow Surg]).

J Bone Joint Surg Am is a peer-reviewed fortnightly medical journal published by The Journal of Bone and Joint Surgery, Inc. (Massachusetts, USA). It is indexed in PubMed, Scopus, CrossRef, Portico and Web of Science, with 4.57 IF 2019. Bone Joint J, formerly known as The Journal of Bone & Joint Surgery British, is a monthly peer-reviewed medical journal published by The British Editorial Society of Bone & Joint Surgery (London, United Kingdom). It is indexed in PubMed, with 4.30 IF 2019. Acta Orthop Traumatol Turc is the official journal of the Turkish Association of Orthopedics and Traumatology (Türk Ortopedi ve Travmatoloji Derneği - TOTDER) and the Turkish Society of Orthopedics and Traumatology (Türk Ortopedi ve Travmatoloji Birliği Derneği - TOTBID). It is a peer-reviewed open-access scientific journal published bimonthly in English. It is indexed in the Science Citation Index Expanded, PubMed, PubMed Central, Scopus, DOAJ, Index Copernicus and TUBITAK ULAKBIM TR Index, with 1.21 IF 2019. Unfallchirurg is the official medical journal of the German Society of Trauma Surgery (Deutschen Gesellschaft für Unfallchirurgie), of monthly periodicity, offering some open access articles and others only by subscription. The articles are peer-reviewed and originally published in German, with abstract in English. It is indexed in the Science Citation Index (SCI) Expanded, PubMed, EMBASE and Scopus, with 0.67 IF 2019. J Shoulder Elbow Surg is the official publication of several medical societies, including Sociedad Latinoamericana de Hombro y Codo. It has monthly periodicity, and its articles are peer reviewed. It offers open access articles and other articles by subscription only. It is indexed in PubMed, EMBASE and Scopus, with 2.81 IF 2019.

Table 1 provides information from selected journals.

The last 15 articles published in 2020 were selected in each of the six journals. All references were evaluated to identify the journal in which they were originally published. The distribution of punctual frequency of the four main journals mentioned, their position and the percentage relative to the total number of citations were observed in each of the journals. The number of times Rev Bras Ortop was mentioned in each of the selected journals was evaluated using its absolute and relative frequencies.

Results

The total number of citations in this study was 2527, ranging from 386 (Rev Bras Ortop) to 486 (J Shoulder Elbow Surg) per journal. Three journals presented high frequency and three journals presented low self-citation frequency. It was observed that The J Shoulder Elbow Surg, Bone Joint J and J Bone Joint Surg Am present firstly citations of themselves, with 22.2%, 13.7% and 11.9% of the citations, respectively, in relation to the total researched in the journal. Rev Bras Ortop, Acta Orthop Traumatol Turc and Unfallchirurg presented low self-references, with 2.6%, 1.0% and 2.2% of citations, respectively, in relation to the total surveyed in the journal. Acta Orthop Traumatol Turc cited itself four times in a total of 391 references and Unfallchirurg 10 times out of a total of 456 referrals. Rev Bras Ortop is sel-f-mentioned in the sixth position (10 out of a total of 386 references used during the study period), however it was not mentioned in any of the other five medical journals included in the study (absolute frequency 0, relative frequency 0).

Table 2 shows the six orthopedic journals analyzed in the study, with its four main citations, in addition to the number of times Rev Bras Ortop was mentioned in each of the journals.

Discussion

It was observed that, in general, there is a low frequency of rev bras ortop citations both in the journal itself and in the other journals researched in this study. In the evaluation of the last 15 articles published in Rev Bras Ortop in 2020, only 10 were from the journal itself, while in the other five journals included in the study the journal was not mentioned at all. The magnitude of the problem is enormous, since it is the main vehicle for disseminating scientific evidence of
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Table 1 Information from orthopedic medical journals used in the study

| Main Journal                  | Who publishes                     | Periodicity   | Indexing                                                                 | IF 2019 |
|-------------------------------|-----------------------------------|---------------|--------------------------------------------------------------------------|---------|
| Rev Bras Ortop                | SBOT                              | Monthly       | PubMed, PubMed Central, Scopus, SciELO and LILACS                         | 0.69    |
| J Bone Joint Surg Am          | The Journal of Bone and Joint Surgery, Inc. | Biweekly     | PubMed, Scopus, CrossRef, Portico and Web of Science                      | 4.57    |
| Bone Joint J                  | The British Editorial Society of Bone & Joint Surgery | Monthly | Pubmed                                                                  | 4.30    |
| Acta Orthop Traumatol Turc    | TOTDER / TOTBID                    | Bimonthly    | Science Citation Index Expanded, PubMed, PubMed Central, Scopus, DOAJ, Index Copernicus and TUBITAK ULAKBIM TR Index | 1.21    |
| Unfallchirurg                  | Deutschen Gesellschaft für Unfallchirurg | Monthly | Science Citation Index Expanded, PubMed, EMBASE and Scopus                 | 0.67    |
| J Shoulder Elbow Surg          | Various medical specialty societies a | Monthly      | PubMed, EMBASE and Scopus                                                 | 2.81    |

Abbreviations: IF, impact factor.

Source: SOT Prof. Nova Monteiro – Hospital Municipal Miguel Couto / IOT Passo Fundo, 2021.

Labels:
- Rev Bras Ortop – Revista Brasileira de Ortopedia
- J Bone Joint Surg Am – The Journal of Bone & Joint Surgery American
- Bone Joint J – The Bone & Joint Journal
- Acta Orthop Traumatol Turc – Acta Orthopaedica et Traumatologica Turcica
- Unfallchirurg – Der Unfallchirurgie
- J Shoulder Elbow Surg – The Journal of Shoulder & Elbow Surgery
- SBOT – Sociedade Brasileira de Ortopedia e Traumatologia
- TOTDER – Türk Ortopedi ve Travmatoloji Derneği
- TOTBID – Türk Ortopedi ve Travmatoloji Birliği Derneği
- a – American Shoulder and Elbow Surgeons, European Society for Surgery of Shoulder and Elbow, Japan Shoulder Society, Shoulder and Elbow Society of Australia, Sociedad Latinoamericana de Hombro y Codo, South African Shoulder and Elbow Surgeons, Asian Shoulder Association, Korean Shoulder and Elbow Society, International Congress of Shoulder and Elbow Surgery e American Society of Shoulder and Elbow Therapists.

Brazilian orthopedists. Although it was not our objective to evaluate the reasons that lead the Brazilian orthopedist to cite their own journal so little, our findings suggest the need to elaborate and implement strategies to encourage the citation of their scientific journal.

There are two ways to deal with this sad reality. One of them is, in a simplistic way, to seek a “culprit,” whether this is the “third-worldist” phenomenon, the search for a “good” foreign periodical or the Brazilian orthopedists themselves cious of “their” discovery. However, it should be in mind that there is no reliable list of good and bad journals, and that the sharing of evidence through scientific publications contributes greatly to minimizing the importance of borders and contributing to the use of evidence in the global health field. In addition, there is no “local” or “very specific” knowledge that is not of interest to any medical journal that seeks quality and transparency.

The other way to deal with the problem of Rev Bras Ortop’s low self-citation is to improve its reputation, which includes indexing in more bibliographic databases, the perception of “prestige” of the journal and the increase of its IF, widely used in the selection of which journal to send the scientific study. It is interesting to note that of the three journals with the highest number of self-citations, the lowest IF 2019 is 2.81, while the highest IF 2019 of the journals with the lowest number of self-citations is 1.21. Currently Rev Bras Ortop’s FI 2019 is 0.69. Interestingly, of the three journals of lesser self-citation, all are of official organs of their medical specialty societies. Despite the potential increase in the visibility of the study among a greater number of professionals in the field when it is published in the journal of their own professional medical association, Morley and Urquhart observed that this link was pointed out as of low importance among professionals of a university hospital of the United Kingdom’s National Health System.

Although IF is is an important criterion for choosing which journal to submit a scientific study, several authors have pointed out limitations in its use, especially for incorrect manipulation and application of self-citations. Moreover, its usefulness does not extend to individual articles, suggesting that there is objectively no correlation between the frequency of citation of an individual article and the IF of a given publication. Finally, it is important to note that the IF does not reflect the quality and transparency in the peer review process to which a journal submits its articles. In the study by Morley and Urquhart, peer review was considered a very important factor in the choice of journal for publication. Reputable journals should fully disclose their peer review process in printed content or on their official Website, and their reviewers should understand the importance of their work in legitimizing publication. The lack of peer review leads to unethical practices such as plagiarism, publication of unscientific falsified data, and unsafe clinical practices. In 2018, more than 42,000 academic journals.
Table 2 Main citations in the six orthopedic journals included in the study

| Main Journals | Main citations | Position | Absolute frequency | Frequency relative to total citations (%) |
|---------------|----------------|----------|--------------------|------------------------------------------|
| Rev Bras Ortop | Knee Surg Sports Traumatol Arthrosc | First | 90 | 23.3 |
|               | Am J Sports Med | Second | 29 | 7.5 |
|               | J Bone Joint Surg Am | Third | 28 | 7.3 |
|               | Spine | 4th | 20 | 5.2 |
|               | Rev Bras Ortop – self-cit | 6th | 10 | 2.6 |
|               | PARTIAL TOTAL | | 177 | 45.9 |
| J Bone Joint Surg Am | J Bone Joint Surg Am - self-cit | First | 50 | 11.9 |
|               | Clin Orthop Rel Res | Second | 28 | 6.7 |
|               | Am J Sports Med | Third | 22 | 5.2 |
|               | J Arthroplasty | 4th | 17 | 4.0 |
|               | Rev Bras Ortop | N/C | 0 | 0 |
|               | PARTIAL TOTAL | | 117 | 27.9 |
| Bone Joint J | Bone Joint J - self-cit | First | 53 | 13.7 |
|               | J Bone Joint Surg Am | Second | 44 | 11.3 |
|               | Spine | Third | 34 | 8.8 |
|               | Clin Orthop Rel Res | 4th | 16 | 4.1 |
|               | Rev Bras Ortop | N/C | 0 | 0 |
|               | PARTIAL TOTAL | | 147 | 37.9 |
| Acta Orthop Traumatol Turc | J Bone Joint Surg Am | First | 24 | 6.1 |
|               | Clin Orthop Rel Res | Second | 23 | 5.9 |
|               | J Hand Surg Am | Third | 17 | 4.3 |
|               | J Shoulder Elbow Surg | 4th | 15 | 3.8 |
|               | Acta Orthop Traumatol Turc - self-cit | 19th | 4 | 1.0 |
|               | Rev Bras Ortop | N/C | 0 | 0 |
|               | PARTIAL TOTAL | | 83 | 21.2 |
| Unfallchirurg | Am J Sports Med | First | 33 | 7.2 |
|               | J Bone Joint Surg Am | Second | 27 | 5.9 |
|               | J Shoulder Elbow Surg | Second | 27 | 5.9 |
|               | Bone Joint J | 4th | 15 | 3.3 |
|               | Unfallchirurg - self-cit | 6th | 10 | 2.2 |
|               | Rev Bras Ortop | N/C | 0 | 0 |
|               | PARTIAL TOTAL | | 112 | 24.6 |
| J Shoulder Elbow Surg | J Shoulder Elbow Surg - self-cit | First | 108 | 22.2 |
|               | J Bone Joint Surg Am | Second | 49 | 10.1 |
|               | Arthroscopy | Second | 19 | 3.9 |
|               | Am J Sports Med | 4th | 18 | 3.70 |
|               | Rev Bras Ortop | N/C | 0 | 0 |
|               | PARTIAL TOTAL | | 194 | 39.9 |

Abbreviation: N/C, not cited.
Source: SOT Prof. Nova Monteiro–Hospital Municipal Miguel Couto / IOT Passo Fundo, 2021.
Subtitles:
Rev Bras Ortop – Revista Brasileira de Ortopedia
J Bone Joint Surg Am – The Journal of Bone & Joint Surgery American
Bone Joint J – The Bone & Joint Journal
Acta Orthop Traumatol Turc – Acta Orthopaedica et Traumatologica Turcica
Unfallchirurg – Der Unfallchirurgen
J Shoulder Elbow Surg – The Journal of Shoulder & Elbow Surgery
Knee Surg Sports Traumatol Arthrosc – Knee Surgery, Sports Traumatology, Arthroscopy
Am J Sports Med – The American Journal of Sports Medicine
Clin Orthop Rel Res – Clinical Orthopaedics and Related Research
J Arthroplasty – The Journal of Arthroplasty
J Shoulder Elbow Surg – The Journal of Shoulder Surgery American volume
reviewed by active peers were published, with an accelerated growth of more than 5% in recent years.27

The influence of Latin American studies in the orthopedic literature has been limited, with a small number of publications conducted in the region.28,29 In 2014, Latin American countries produced only 1% of all published orthopedic articles.29 Of the 50 most cited articles, 20 were by Brazilian authors, but no national journal was used as a reference. In this context, what is necessary for Brazilian orthopedists to recognize the importance of Rev Bras Ortop and choose to publish their studies? Moreover, how to motivate the citation to the national authors who publish in the journal? Understanding the characteristics that make the articles cited by other scientists can help researchers, institutions and governments promote quality research that could become more influential to the international orthopedic scientific community.29

This challenge does not seem to be exclusive to Rev Bras Ortop. In our study, we observed that of the four journals published by their professional specialty associations, only Bone Joint J self-cited first. Certainly, this finding reflects the diversity of subjects covered by Bone Joint J, but also its reputation and credibility built over years. Chomsky-Higgins et al.28 highlighted the need for strong policies to encourage scientific production, such as support for multicenter projects and clinical studies that benefit the local population, encouraging residents and young orthopedists to produce quality research and improvement of hospital infrastructure. Thus, as the largest professional and educational entity of Brazilian orthopedics, SBOT needs to foster training and obtain the necessary funding to develop national data that can be published in its own journal, increasing the visibility of Brazilian research and researchers on the world stage. In parallel, there is a need for this and other professional medical associations to act with government institutions, such as CAPES, in order to reduce bureaucratic pressure, characterized by arbitrary elevation of cutting levels for financing purposes, which leads national authors to try to publish their manuscripts in journals with higher IF in their field of research, instead of seeking a Brazilian journal, such as Rev Bras Ortop.30

Among the limitations of the study, we highlight mainly the short period of data collection (last 15 articles published in 2020) and the lack of investigation of the reasons that lead the Brazilian orthopedist to cite so little of their own journal. Because this is a cross-sectional observational study, we examined the self-citation rate at a given time, evaluating the strength of the relationship between the exposure factor and bibliometric variables taken into account in scientific journals, such as IF, peer review and main editorial source. Cross-sectional studies are known to have an inherent temporal dimension, as they verify the prevalence of the exposure factor at present time.31 Thus, we observed that Rev Bras Ortop showed a low self-citation rate, suggesting the need to implement specific strategies to reverse the current scenario. Understanding the reasons for the low self-citation rate is fundamental, but the fact that this was not the focus of the present study does not make it impossi-

ble to take actions that improve the visibility of the main scientific publication of SBOT.

Conclusion
It was observed that Revista Brasileira de Ortopedia has a low self-citation rate, showing that Brazilian orthopedists do not mention Brazilian orthopedists who publish in the journal. We suggest the development and implementation of strong strategies to improve the visibility of the journal in the world academic-scientific scenario. It is essential that Brazilian orthopedists understand this reality and help directly and effectively in their change.

Conflict of Interest
The authors declare that there is no conflict of interest.

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