

## Brazilian nursing journals: strengths, weaknesses and challenges

*Periódicos brasileiros de enfermagem: fortalezas, fragilidades e desafios*

*Periódicos Brasileños de enfermería: fortalezas, fragilidades y desafíos*

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### How to cite this article:

Avena MJ, Barbosa DA. Brazilian nursing journals: strengths, weaknesses and challenges. Rev Bras Enferm [Internet]. 2018;71(5):2489-95. DOI: <http://dx.doi.org/10.1590/0034-7167-2017-0828>

Submission: 02-06-2018

Approval: 04-13-2018

### ABSTRACT

**Objective:** To evaluate, qualitatively, the Brazilian nursing journals and identify their strengths and weaknesses when compared to international journals in the area. **Methods:** A historic approach regarding the period from 2012 to 2016. We included national nursing journals indexed in the SciELO Database and international journals with an impact factor above 1.0 and below 1.8 indexed in the WoS and Scopus databases. **Results:** The national journals met SciELO requirements for internationalization and obtained visibility when they were included in international indexing bases. Their citations were mostly national, with the following mean values: 86% in Portuguese; 12% in Spanish and 2% in English. **Conclusion:** The excellence requirements of the national journals are being accomplished. The publication of articles in Spanish can impact on the increase of bibliometric indicators.

**Descriptors:** Quality Management; Periodicals; Bibliometrics; Nursing; Research.

### RESUMO

**Objetivo:** Avaliar qualitativamente os periódicos nacionais de enfermagem e apontar aspectos fortes e frágeis quando comparados a revistas internacionais da área. **Método:** Recorte histórico referente ao período de 2012 a 2016. Foram selecionados periódicos de enfermagem tanto nacionais indexados na Base SciELO quanto internacionais que alcançaram fator de impacto acima de 1.0 e abaixo de 1.8, indexados nas Bases WoS e Scopus. **Resultados:** Os periódicos nacionais atenderam às exigências da SciELO para a internacionalização e obtiveram visibilidade ao serem incluídos em Bases Indexadoras internacionais. As citações feitas a esses periódicos foram majoritariamente nacionais, com as seguintes médias: 86% em português; 12% em espanhol e 2% em inglês. **Conclusão:** As exigências que conferem excelência às revistas nacionais estão sendo cumpridas. A publicação de artigos em espanhol pode impactar na ascensão dos indicadores bibliométricos.

**Descritores:** Gestão de Qualidade; Publicações Periódicas; Bibliometria; Enfermagem; Pesquisa.

### RESUMEN

**Objetivo:** Evaluar cualitativamente las revistas nacionales de enfermería y identificar los aspectos fuertes y frágiles en comparación con las revistas internacionales en el área. **Métodos:** Enfoque histórico, referido al período de 2012 a 2016. Revistas nacionales de enfermería indexadas en la Base SciELO, así como las internacionales que lograron un factor de impacto por encima de 1.0 y por debajo de 1.8, indexadas en las Bases WoS y Scopus. **Resultados:** Las revistas nacionales cumplieron con los requisitos de SciELO para la internacionalización y obtuvieron visibilidad cuando se incluyeron en las bases de indexación internacional. Las citas recibidas fueron en su mayoría nacionales, con un 86% en portugués; 12% en español y 2% en inglés. **Conclusión:** se están cumpliendo los requisitos que otorgan excelencia a las revistas nacionales. La publicación de artículos en español puede afectar el aumento de los indicadores bibliométricos.

**Descriptores:** Gestión de la Calidad; Publicaciones Periódicas; Bibliometría; Enfermería; Investigación.

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## INTRODUCTION

Internationalization, visibility and globalization are some of the challenges imposed to the modern Brazilian science, therefore there are new demands to the nursing journals<sup>(1)</sup>.

The increase in scientific production, resulting from incentives for the development of researchers and of new graduate programs, requires rethinking the mechanisms for the documentation and dissemination of the knowledge produced<sup>(2)</sup>.

The indexing of Brazilian Nursing Journals in SciELO, CUIDEN and LILACS databases and - in a lesser extent - in Scopus and Web of Science (WoS), makes the journal internationalization process urgent, and requires "planning, dedication, financial investment and efforts of the editorial team"<sup>(3-5)</sup> for rapid adaptation to international publishing standards.

These actions have made it possible to improve the quality of the journals and were achieved through these main actions: article publication in at least two languages, one of which must be English; expansion of the editorial boards, with the inclusion of foreigners; implementation of electronic submission and manuscript evaluation; maintenance of periodicity; and careful peer reviewing<sup>(4)</sup>.

In 2014, SciELO published a document that establishes "*Criteria, policy and procedures for admission and permanence of scientific journals in the SciELO Brazil collection*", with the following objectives:

to guide and strengthen the development of the scientific quality of the SciELO Brazil collection and contribute to the sustainable increase of its visibility and impact as a whole, and of the journals individually that are indexed and published, matching the international standards of indexing, publication, interoperability and assessment of journal performance<sup>(6)</sup>.

The requirements for indexing in the SciELO database were severe before, but this new list of prerequisites has imposed extra challenges to the publication in nursing journals, which sought to achieve international levels of quality and excellence by increasing the number and internationalization of associated publishers; using softwares for fully online editorial process management; predominance of original and revision articles, i.e., scientific research manuscripts and/or trials that are relevant to the thematic area; publishing in English as an additional language; adopting of *xml* marking systems for exporting metadata, among others<sup>(4,7)</sup>.

Indexing in national and international databases by means of complete or referenced records, with or without bibliometric indicators, provided greater visibility to the publications, thereby becoming an important criterion to evaluate their quality through the Capes/QUALIS stratification, which also impacted assessment by funding agencies for the allocation of resources to researchers<sup>(4)</sup>.

Therefore, considering this competitive scenario and the need to internationalize the journals according to the SciELO criteria<sup>(6)</sup>, this study analyzed the adequacy of the national nursing journals to these established requirements.

## OBJECTIVE

To evaluate the national journals and identify their strengths and weaknesses when compared to the international journals in the area.

## METHOD

### Ethical aspects

The Research Ethics Committee of the Federal University of São Paulo approved the project.

### Design, period and site of study

A historic approach regarding the period from 2012 to 2016, using data available on the internet.

### Inclusion criteria

Nursing journals published in Brazil were selected, with characteristics of broad-spectrum journals within the scope of nursing science and indexed in the SciELO base: *Acta Paulista de Enfermagem*; *Escola Anna Nery Revista de Enfermagem*; *Revista Brasileira de Enfermagem*; *Revista da Escola de Enfermagem da USP*; *Revista Gaúcha de Enfermagem*; *Revista Latino-Americana de Enfermagem*; *Texto & Contexto Enfermagem*.

International nursing journals with a broad spectrum were also selected, with a similar scope to the national ones and a Web of Science impact factor between 1.0 and 1.8: *American Journal of Nursing*; *Applied Nursing Research*; *International Nursing Review*; *Journal of Nursing Care Quality*; *Nursing & Health Sciences*; *Nursing Inquiry*; *Research in Nursing & Health*. This impact factor range was chosen for the journal analysis because it was the gold standard to establish qualitative differences compared with the national ones.

### Data collection

The search was performed on the public data available on the Internet of the journal websites, in the SciELO Analytics citations and through the H index in WoS and Scopus, in the period between 2012 and 2016.

The analyzed variables were: time since journal was established; type of article access (open or restricted); association with commercial publisher; features of the home page: journal identity and communication resources; link to any association: (yes-no); Periodicity: monthly, bimonthly, quarterly or continuous flow; Electronic support; Internationalization of the editorial board and H index of the editors-in-chief; Quality of submission flow, through clarity of instructions to authors; Use of software to detect plagiarism; Publication of full-text, abstracts and descriptors in more than one language; Submission and publication fees; Citation export tools and how-to-cite instructions; Presence in social media and mechanisms of relationship with author or reader; and Distribution of citations received and references made by the journals in the three languages.

### Results analysis

The collected data were imported into MS-Excel for tabulation and analysis. The statistical tool SciELO Analytics, Beta version, was used to assess the granted and received citations by the national journals.

## RESULTS

Chart 1 shows the general characteristics of the analyzed journals.

**Chart 1 – General characteristics of the analyzed journals**

Journals	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Type of access	A	A	A	A	A	A	A	H	H	A	H	H	H	A
Publisher Webpage	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Own Webpage	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N
Association	N	N	S	N	N	N	N	S	N	Y	Y	N	Y	Y
Support	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Periodicity	BM	CF	BM	CF	CF	CF	QT	M	CF	TTY	TTY	TTY	TTY	TTY

Source: Journal Websites. 2017.

Note: 1 to 7 = National Journals; 8 to 14 = International journals; A = Open Access; H = Hybrid; E = Electronic; BM = Bimonthly; M = Monthly; N = No; Y = Yes; CF = Continuous Flow; QT = Quarterly; TTY = Three Times a Year

The national journals adopt the Open Access model. Among the international ones, four adopt the hybrid model and three adopt Open Access.

All 14 journals are linked to some Publisher: the national ones to SciELO, in partnership with public management, and the international ones to commercial publishers. Only the national journals have their own websites in addition to the SciELO webpage, usually associated to the institutions to which they belong.

Among the international journals, two did not declare any link to any agency or class association. Only one national journal declared to be part to one class association, and the others to nursing schools at public universities.

All the journals are published electronically, with search engines through the publishers.

Four national journals adopt continuous flow of publication; two are bimonthly and one is quarterly. Among the international journals, one is monthly; one declares itself as continuous-flow and five journals publishes three times a year.

**Chart 2 – Historical analysis, form of presentation to users and use of media**

Journals	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Establishment	1988	1997	1932	1967	1976	1993	1992	1900	1988	1960	1986	1999	1994	1978
Ethical aspects declaration	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y	Y	Y
Anti-plagiarism software	Y	Y	Y	Y	NA	NA	NA	NA	NA	Y	NA	NA	Y	Y
Clarity in IAs*	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Flow explanation	Y	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y
Full-text language	2	3	2	3	2	3	2	1	1	2	1	1	1	1
Abstract/descriptors languages	2	3	3	3	3	3	3	1	1	2	1	1	1	1
Fees	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
How-to-cite	N	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y
Citation Export	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Facebook	Y	Y	N	N	N	N	Y	Y	N	Y	Y	Y	N	N
Twitter	Y	Y	N	N	N	N	N	Y	N	Y	Y	Y	Y	N
Others (Mendeley, etc.)	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N
E-mail alerts	N	Y	N	N	N	N	N	Y	Y	N	Y	Y	Y	N

Source: Journal sites, 2017.

Note: IAs = Information for authors; NA – Not available; Y = Yes; N = No.

Chart 2 describes data from the journals related to the presentation to the users and the use of media.

The time since journal establishments includes an interval of more than 100 years: the oldest one completes 117 years, and the youngest one is 18 years old. There was a historically similar result for national and international journals.

With regards to the clarity of instructions to authors, description of the submission flow and the declaration of requirement of the ethical aspects are presented by all the journals, but only in one international journal this information is not described, although a link is made available for access to the Ethics Committees. Regarding the adoption of anti-plagiarism software, four national and three international journals mention using it in the instructions to authors, and the others do not have this type of information.

Six national journals adopt three languages: Portuguese, English and Spanish, for abstracts and descriptors, one of which also publishes the full text in all the three languages. Only one national journal publishes the abstracts and descriptors in English and Portuguese only, and the others publish only the full text in Portuguese and English. Of the international journals, only one is published in both English and Spanish, and the others are published only in English.

The national journals clearly describe in their instructions the fees they collect. The international ones only inform them during the submission process.

**Chart 3 – Editorial Board Composition**

Journals	1	2	3	4	5	6	7	M(SD)	8	9	10	11	12	13	14	M(SD)
Editors-in-chief - H index	8	8	12	19	5	14	8	10(4.7)	3	20	9	18	6	26	17	14(8.3)
International editorial board (%)	69	56	29	34	32	56	46	46(15)	32	10	5	8	87	81	6	33(36)
National editorial body (%)	31	44	71	66	68	44	54	54(15)	68	90	95	92	13	19	94	67(36)

Source: H index: WoS and Scopus. Composition: Journal site. 2017.  
Note: M = Mean; SD = Standard deviation.

**Chart 4 – Distribution of the granted and received citations by national journals according the language**

Journals	1	2	3	4	5	6	7
<b>References made</b>	5842	4863	7452	17200	6966	12690	12242
Portuguese	3210(55%)	3970(82%)	5815(78%)	10089(58%)	5499(79%)	6932(55%)	8807(72%)
Spanish	72(1%)	97(2%)	69(1%)	143(1%)	69(1%)	321(3%)	225(2%)
English	2560(44%)	796(16%)	1568(21%)	6968(40%)	1428(21%)	5437(42%)	3210(26%)
<b>Citations received</b>	3860	4198	5293	6414	2330	8439	4562
Portuguese	3374(87%)	3796(89%)	4638(88%)	5653(88%)	2065(89%)	7039(83%)	4055(89%)
Spanish	383(10%)	303(9%)	534(10%)	617(10%)	216(9%)	1162(14%)	408(9%)
English	103(3%)	99 (2%)	121(2%)	144(2%)	49(2%)	238(3%)	99(2%)

Source: SciELO Analytics: 2017 - Citations received between 2012 and 2016. Granted citations between 2012 and 2016.  
Note: Only granted citations to journal articles were considered.

Five national and five international journals disclose the correct manner of citing their articles in the “how to cite this article” statement. They all have some citation export mechanism for reference managers such as Mendeley or BibTex.

Three national journals have discreet actions in social media, with the dissemination of news restricted to the activities of the area, entity or journal, and no publication was identified that promoted articles or could attract readers. International journals, on the other hand, are more active, as several “posts” are published daily on the trials, events and lectures, including links to access the journal’s contents.

Regarding the release of alert e-mails, only one national journal does it, whereas five international journals follow this conduct.

Chart 3 shows the h-factor of the editors-in-chief and the percentage of international members that compose the editorial board of the national and international journals.

The h-factor of the editor-in-chiefs is shown as a mean index of WoS and Scopus; the national index was 10 (SD4.7), and the international index was 14 (SD8.3). The editorial composition of both groups meets the requirement of having 30% of international members.

The analysis of the granted and received citations by the national journals during the analyzed period is shown in Chart 4, in order to know the achieved outcomes to increase the visibility in the international community.

Most citations - over 50% - are made to documents published in Portuguese. The rest - between 16% and 44% - is related to articles in English, and a small portion - from 1% to 3% - is made to publications in Spanish.

The majority of citations received by national journals - between 83% and 89% - were originated from articles published in Portuguese, while 9% to 14% were from publications in Spanish, and only 2% to 3% came from articles in English.

## DISCUSSION

Open access, which is normative for the national journals<sup>(6)</sup>, was identified in most of the international journals analyzed in this study, suggesting a consensus among researchers in the area, represented by several manifestos and decisions of development agencies, such as the European Union, the Gates Foundation and the Harvard Open Access Project<sup>(8)</sup>.

The national journals are mostly linked to some public university and, therefore, rely on the public resources for their maintenance, as well as the collection of publication fees - Article Processing Charges (APCs)<sup>(9-10)</sup>. Only one journal belongs to a class association. Although all of them have an electronic page linked to the institutions to which they belong, with their own identity and agenda, full-text articles are available only in SciELO, with the portal interface and the search tools available there<sup>(11)</sup>.

On the other hand, international journals are exclusively hosted by *Publishers*, do not have their own webpage and belong mostly to class associations. Those that adopt Open Access also collect APCs, with values much higher than the national ones<sup>(9-10)</sup>. Therefore, several authors point to the establishment of a new market models that are excludent in this new format<sup>(8-9)</sup>.

The same tool that facilitated the Open Access movement has also allowed it to reduce the costs of publishing and the time for article publication, which changed the periodicity of the issues and contributed to the punctuality of the editions<sup>(1)</sup>. This represents the possibility of publications in *continuous flow*, which is characterized by the availability of articles as they are reviewed, edited, translated and finalized, and allowing the adoption or not of editing fascicles. This model provides significant agility to the editorial process, but requires care to ensure the correct citation of the articles, because each one will



need, in addition to the Digital Object Identifier (DOI) provided by CrossRef, a unique identifier within the volume or fascicle<sup>(12)</sup>.

Among the seven national journals, four adopt the *continuous flow* and, of the international ones, only one had this information in its webpage. However, two others, even though they do not declare it in their instructions or pages, demonstrate that it is used, as the information "*In progress*" is showed in the number field, even with the division by volume and number

This model brings a new meaning to the concept of *immediate*, introduced by the electronic publication of articles<sup>(11)</sup>. However, as a recent model, the impact of this form of publication on bibliometric indicators is not yet noticeable. Depending on how the indexes are calculated, the addition of more immediate citations may determine an increase in the journal's Immediate Index, in detriment of the traditional Impact Factor (IF)<sup>(13-14)</sup>. This model can be presented as continuous paging or as adopted by SciELO, which uses only volume identification without numbers, assigning to each article an electronic identifier, named *elocation-id*, having the summary only finalized at the end of the volume<sup>(12)</sup>. In this model, normalization of the reference is fundamental to ensure the citation retrieval<sup>(13)</sup>.

The main challenge encountered by national journals is to maintain sustainability, as they depend entirely on the financial contribution of development agencies and the logistical support of the institutions to which they belong<sup>(15)</sup>. This support includes physical facilities, equipment, human and financial resources<sup>(1,15)</sup>. In general, these investments are complemented by the resources from the submission fees (APCs). This sustainability should not only be financial, but also in terms of international quality and visibility<sup>(16)</sup>, which requires conditions to maintain the structure and continuity of processes and the accumulated knowledge<sup>(13)</sup>.

In total, the editors are university researchers, who act as volunteers and improve their function by means of courses and conferences sponsored by publishing entities<sup>(17-18)</sup>.

As for the hypothesis that the experience of the editor-in-chief as a researcher is indicative of the management quality, which would increase the possibility of better quality indicators of the journal, the investigation of their "h" indexes showed similarities between the managers of the national and international journals.

In the editorial boards of the national journals, the percentage of foreign editors achieved, that requested by SciELO, and even exceeded it in some cases, whereas the international ones oscillate at both extremes<sup>(6,19)</sup>.

For the editorial staff to be exclusively dedicated to the excellence of the scientific content, it is important to "professionalize management, operation, dissemination and marketing"<sup>(13)</sup>, defined as a "set of characteristics and conditions of management and operation that contribute to minimizing the time and maximize transparency in the process of manuscripts assessment"<sup>(13)</sup>.

All journals were well evaluated in terms of clarity of their instructions to the authors, commitments to ethical aspects of the research, and adequate presentation of the submission flow, which demonstrates the transparency of the process<sup>(6,18)</sup>.

The aspects related to the communication of the journals with their readers and authors<sup>(20)</sup> are the most distinct between national and international journals.

The inequalities of resources are more evident in the journal pages. The international journals promote the articles that were most cited and searched through various media resources, such as video, interviews, among others. The national ones do not have active actions, but in each article, links are provided for sharing in social and academic media. The graphical interface of the journal, volumes and fascicles has not changed in the last 10 years.

Publication in more than one language, one of which must be the English, is a requirement of SciELO, aiming to internationalization and increased visibility. Although it makes the editorial process more expensive, this demand allowed for the insertion of national journals in the International Indexing Bases, e.g., Scopus and Web of Science<sup>(6,18)</sup>. However, by analyzing the citation distribution by languages, this effort has not resulted in a higher number of citations. While some national journals = include over 40% citations of articles published in English in their references, none of them received more than three percent (3%) citations in that language<sup>(21-22)</sup>. On the one hand, there is a strong tendency to include references to articles published in English and, on the other hand, a few citations to articles in Spanish<sup>(15,23)</sup>. When the origin of the citations received is analyzed, the participation of the Spanish language increases, while the citations in English decrease significantly<sup>(24)</sup>. By contrast, a greater tendency of the journals published in Spanish to cite the Brazilian journals was found, which may point to the fact that this is a public that is recognized and approved by the editors.

An aspect concerning the nature of the publications cited by national journals is relevant. For the table construction, the documents that were not cited according to the criteria established in the index bases were excluded, such as books, chapters, manuals, reports, lectures and legal devices, which in some of the journals represent more than 50% of the references made, which decreases the potential of being cited<sup>(25,22)</sup>.

Another important aspect is the existence of several variants of journal names among the citations. One of the journals had eight different forms of its name among the references made by itself. Five journals adopted the "*How to cite this article*" instruction, to make it easier for readers to know the correct manner of citing their articles in their references.

### Study limitations

The main limitation of this study is the fact that the international journals potentially selected as reference standards had higher impact factor than the national ones, which can lead to empirical interpretations.

### Contributions of the study to nursing area

The national journals differ from the international ones in a few qualitative aspects, which can be easily solved by the journals. In this way, the results showed some options to be followed by the journal editors in the pursuit of excellence.

### FINAL CONSIDERATIONS

The national nursing journals fully meet the criteria of excellence established by SciELO. Efforts have been made to increase their visibility and internationalization.

In a context of scarce resources, alternatives should be sought to reduce this difficulty, e.g., consolidating knowledge accumulated by the teams, which should also be documented and shared. Thus, the establishment of virtual groups to share doubts and experiences of the teams emerges as a proposal to be stimulated.

The national journals can also introduce partnerships among themselves, in order to optimize human and infrastructure resources, primarily through a portal that centralizes their activities of dissemination and relationship with the readers. With a view to increasing the presence and permanence of the national journals in the databases, the creation of an interchange channel with the indexing bases is suggested. SciELO should mediate this international interlocution with the databases.

Another suggestion involves rethinking the current restriction on the publication of advertisements in the journals, as no provision for increasing the contribution of public resources for scientific research is available.

As it is made in the training for using the International Bases, an instructive material could be developed on the use of tools

that enrich the research experience in SciELO, such as the use of reference managers, sharing media, among others.

In parallel, journals need to strengthen their bonds with authors and readers in order to attract more interest for publication of good articles and thus more citations. Authors should be encouraged to disclose their articles on social media, as well as the important findings must be released in the conventional media.

As for the model adopted for continuous flow, this study has brought elements to suggest that the adopted model of annual volume, without fascicles, should be revised and preferably substituted by the international standard of fascicles with summaries and individual covers, which can be more attractive to the readers.

In summary, this study allowed it to identify that the qualitative aspects that confer excellence to the national journals are being accomplished, and this editorial effort can possibly be maximized through a political movement of the publishers to obtain the support of the publisher regarding international marketing.

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