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**How to cite (Vancouver):**

Garcia LP, Rode SM, Packer AL. 50 years of RBSO, 25 years of SciELO, and 38 years of ABEC Brasil: contributions to open science. Rev Bras Saúde Ocup [Internet]. 2024;49:edcinq19. Available from: <http://doi.org/10.1590/2317-6369/nt124en2024v49edcinq19>

## 50 years of RBSO, 25 years of SciELO, and 38 years of ABEC Brasil: contributions to open science

*50 anos da RBSO, 25 anos do SciELO e 38 anos da ABEC Brasil: contribuições para a ciência aberta*

### Abstract

As part of the celebration activities for the fiftieth anniversary of the Brazilian Journal of Occupational Health (RBSO), the event “50 years of RBSO, 25 years of SciELO, and 38 years of ABEC Brasil: contributions to open science” was held in February 2024. This editorial note reports on that event, briefly describing the history of the journal and the entities represented: the Scientific Electronic Library Online (SciELO) project and the Brazilian Association of Scientific Editors (ABEC Brasil), as well as their scopes, challenges, and prospects. Open Science was chosen as the theme to stimulate debate, as it is a relevant and cross-cutting issue that permeates the activities of the journal and the organizations. RBSO has followed the open access principles since its inception, even before the emergence of the open access movement and the debate around open science. More recently, it has adopted other open science practices such as accepting preprints, encouraging research data deposition, and adopting aligned editorial policies. SciELO and ABEC Brasil have been important catalysts for initiatives related to open science, aiming not only to strengthen journals but also to expand scientific collaborations and the sharing of scientific knowledge for the benefit of science and society.

**Keywords:** occupational health; electronic journals; periodical publication; commemorative publication; academic communication; open science.

### Resumo

Para comemorar o cinquentenário da Revista Brasileira de Saúde Ocupacional (RBSO), foi realizado, em fevereiro de 2024, o evento “50 anos da RBSO, 25 anos do SciELO e 38 anos da ABEC Brasil: contribuições para a ciência aberta”. Esta nota editorial reporta tal evento, descrevendo brevemente o histórico da revista e das entidades representadas: o projeto *Scientific Electronic Library Online* (SciELO) e a Associação Brasileira de Editores Científicos (Abec Brasil), assim como seus alcances, seus desafios e suas perspectivas. A ciência aberta foi escolhida como assunto para estimular o debate, por ser um tema relevante e transversal que perpassa as atividades da revista e das entidades. A RBSO segue os princípios do acesso aberto desde sua criação, ainda antes do surgimento do movimento do acesso aberto e do debate em torno da ciência aberta. Mais recentemente, aderiu a outras práticas da ciência aberta, como a aceitação de *preprints*, o incentivo ao depósito de dados de pesquisa e a adoção de políticas editoriais alinhadas. SciELO e Abec Brasil têm sido importantes catalisadores das iniciativas relacionadas à ciência aberta, visando fortalecer os periódicos e ampliar as colaborações científicas e o compartilhamento do conhecimento científico em benefício da ciência e da sociedade.

**Palavras-chave:** saúde do trabalhador; revistas eletrônicas; publicação periódica; publicação comemorativa; comunicação acadêmica; ciência aberta.



## Introduction

In 2023, several activities were held in celebration of the Brazilian Journal of Occupational Health's (RBSO) 50th anniversary, an important milestone<sup>1-3</sup>. These initiatives involved not only RBSO's editorial team but also other sectors of the Jorge Duprat Figueiredo Foundation for Safety and Occupational Medicine (Fundacentro), as well as partner entities, particularly the SciELO Project, which celebrated its 25th anniversary in 2023<sup>4</sup>, and the Brazilian Association of Scientific Editors (ABEC Brasil), which completed 38 years.

As part of the celebration activities, the event titled "50 years of RBSO, 25 years of SciELO, and 38 years of ABEC Brasil: contributions to open science" (**Figure 1**) was held on February 28, 2024, at Fundacentro's National Technical Center in webinar format and livestreamed on its YouTube channel (<https://www.youtube.com/watch?v=O6qfhyTfwa8>).

The banner features a dark blue background with white and orange text. At the top left, it says 'EVENTO ON-LINE' in orange. Next to it is the RBSO logo and '50 ANOS' in large white letters. To the right, the main title is written in orange and white: '50 anos da RBSO, 25 anos do SciELO e 38 anos da ABEC: contribuições para a ciência aberta'. Below this, two columns are labeled 'Palestrantes' and 'Coordenador'. Under 'Palestrantes', there are two circular portraits: Sigmar de Mello Rode (Presidente da Associação Brasileira de Editores Científicos) and Abel Packer (Diretor do Programa SciELO). Under 'Coordenador', there is one circular portrait: Leila Posenato Garcia (Editora-Chefe da RBSO). At the bottom left, the date '28.02.2024' and time '10h às 12h' are displayed. In the center is a QR code. To the right of the QR code is the YouTube logo and the text '/fundacentrooficial'. At the bottom right is the Fundacentro logo.

**Figure 1** Webinar promotion banner

The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines open science as “an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community”<sup>5</sup> (p. 7). Open science was chosen as the webinar theme for its relevance and cross-cutting nature, which permeates the activities of all represented entities.

Coordinated by Leila Posenato Garcia, Co-Editor-in-Chief of RBSO, the webinar featured Professor Sigmar de Mello Rode, President of ABEC Brasil, and Abel Laerte Packer, Director of the SciELO Program, as speakers.

This editorial note reports on the event, highlighting the main points discussed in the presentations and debates. Such a report is relevant not only to record an activity held in the context of RBSO's 50th anniversary celebration but also because the event provided important inputs for the continuous strengthening of the journal.

## 50 years of RBSO: from history to future perspectives

Leila Posenato Garcia began by presenting a brief history of RBSO, the first journal dedicated to occupational health and safety in Brazil, the first issue of which was published in April 1973. Since then, RBSO has been edited

and published by Fundacentro. Its first volume consisted of four issues, featuring articles by authors such as PhD physicians Bernardo Bedrikow, Daphnis Souto, Diogo Pupo Nogueira, and René Mendes. In addition to occupational accidents, acoustics, and lighting, the journal already addressed issues that gained importance over time, such as ergonomics, fatigue, and shift work<sup>6</sup>.

Despite its alignment with the field of Collective Health, RBSO is a multidisciplinary journal that provides space for publications related to Occupational Safety and Health written by authors from various fields, such as engineering, nursing, physiotherapy, occupational medicine, law, among others.<sup>7</sup>

RBSO's history can be divided into three phases:

1) In the 1970s and 1980s, the journal contributed to disseminating knowledge about occupational health and safety and state accident prevention policies, in which Fundacentro played an important role. Articles, reports, and proceedings of events were published.

2) From late 1980s to early 2000s, RBSO provided space for technical-scientific publications and translations. An expanded scope allowed attention to be paid to the relation between work and health. This phase lacked scientific editing and had a journalist as editor-in-chief. There were periods of crises and discontinuities.

3) From 2003 onwards, after implementing an editorial reorientation project RBSO became a scientific journal, publishing its regulations in December 2006. Its current version is the result of this initiative, led by researchers José Marçal Jackson Filho, Eduardo Garcia, Mina Kato, and Eduardo Algranti, among others<sup>6,7</sup>.

In summary, RBSO has followed the evolution and coexistence of different approaches and theoretical frameworks on the relation between health and work, such as Occupational Medicine, Occupational Health, and Worker's Health<sup>7</sup>.

RBSO joined ABEC Brasil in 2009. Since then, there have been numerous opportunities for editorial team training, such as congresses, meetings, workshops, and webinars. These opportunities helped to professionalize the editorial team, improve journal processes, and strengthen strategies to promote open science and the principles of diversity, equity, inclusion, and accessibility.

RBSO entered the SciELO Brazil Collection in 2012. Currently, articles published from volume 28 (2003) onwards are available on the SciELO portal. In 2016, the journal adopted the continuous and exclusive online publication model. Indexation in the SciELO Brazil Collection was fundamental for RBSO's development, as it increased the journal's visibility, global strengthening, access to the editorial management system, and plagiarism detection tool, rigorous criteria compliance for maintenance in the collection, with emphasis on alignment with open science principles.

RBSO has been an open-access journal from print, which was distributed free of charge. Its online publication began in the diamond open access model, which has no access barriers and allow authors to retain their copyrights while paying no publication fees. To comply with open science principles, RBSO started accepting preprint submissions, publishing the name of the responsible editor for each article that undergoes peer review, process that remains anonymized, and encouraging data deposition in repositories such as SciELO Data.

RBSO has published 132 print editions (until 2015) and nine volumes exclusively online (2016 to 2023), 16 thematic dossiers, and over 1,500 articles. There have been over 5 million online accesses registered. The journal's electronic system has over 7,000 people registered as authors and/or reviewers. In the most recent Qualis CAPES evaluation, the journal was classified as B1. In 2023, it ranked 47th on the Google Scholar Metrics, including all journals whose primary language is Portuguese. The number of articles published per volume has been increasing since 2014. In 2023, the journal published 42 documents.

Future challenges for RBSO include increasing the number of submitted and published articles, indexation in international bibliographic databases, and continuous strengthening. Submission boost and publication of high-quality articles are enabled by the launch of article calls for thematic dossier composition. At the end of

2023, the call for articles for the dossier “Sustainable Development and Worker’s Health” was launched. For 2024, the journal plans to launch two more calls-for-articles.

## **ABEC Brasil: history, partnerships, activities, and challenges**

Founded in November 1985, ABEC Brasil is an international non-profit civil society organization that brings together individuals and entities interested in developing and improving the publication of technical-scientific journals.

In February 2024, ABEC Brasil had 1,116 members, with 526 individual and 590 institutional members. São Paulo (n=315) and Rio de Janeiro (n=171) accounted for the highest number of members among Brazilian states.

In 1996, during the IV National Meeting of Scientific Editors promoted by ABEC Brasil, the society proposed the creation of the Scientific Electronic Library Online (SciELO).

In 2014, ABEC Brasil, the Brazilian Institute of Information in Science and Technology (IBICT), and Crossref (an international non-profit institution aimed at proper cataloging of scientific publications) established an agreement to facilitate the Digital Object Identifiers (DOIs) deposition for Brazilian institutions’ scientific production. In this agreement, ABEC assumed the role of “Sponsoring Affiliate” and is currently one of the leading bodies of its kind worldwide.

ABEC Brasil partnered with the US Council of Science Editors (CSE) in 2015 to turn the editor training program ProCPC more accessible to the Brazilian public, as most certification requirements would then be fulfilled in Brazil.

In 2018, ABEC Brasil became part of the Open Government Partnership (OGP), a global initiative created in 2011. In 2022, the agency coordinated the qualification proposal for scientific journals and alternative criteria in open science dimensions to enrich Qualis stratification. In 2023, the 6th National Action Plan on Open Government 2024-2027 was launched. To boost academia participation, ABEC Brasil, in partnership with SciELO, will act on two fronts: (1) awareness-raising and valuation actions for Brazilian journals to adhere to open science practices, and (2) roundtable discussions on open science in meetings with funding agencies representatives.

In 2021, in partnership with IBICT, ABEC Brasil participated in the launch of the Emerging Research Information (EMERI) portal, a preprint server managed by journals where authors cannot directly publish articles.

ABEC Brasil played an active role in proposing the Latin American Association of Scientific Editors (ALAE). A working group was created in 2021, which resulted in the foundation of ALAEC in 2023.

In 2022, ABEC Brasil partnered with the European Association of Science Editors (EASE) to create the Brazilian Chapter, a recent initiative that should be promoted among Brazilian journal editors.

Another recent achievement by ABEC Brasil is the certification of scientific editors via a series of courses on topics related to scientific publication offered on a remote education platform. Topics included scientific article evaluation, indexers, institutional support for scientific editing, plagiarism detection tools, editorial policies, and open science.

Current challenges for ABEC Brasil’s operations include:

1) Making open science a government policy remains a challenge. The novelty in this area is the signing of transformative agreements between CAPES and major international publishers to enable paper publication by Brazilian researchers in foreign open-access journals without direct payment.

2) Rapid expansion and evolution of Artificial Intelligence (AI) tools, particularly generative AI applied to language models, not only pose a global problem to journals but brings significant impacts to research and scientific publication, requiring established standards and firm action by journal editors, aligned with ethics and integrity.

Professor Sigmar concluded his presentation by emphasizing the relevance of open science thusly: “Open Science is a path of no return. You do not have to be the first to join, but you should not be the last, as you risk losing your role in history” (p. 115)<sup>8</sup>.

## 25 years of SciELO: open science with IDEIA

One of SciELO’s main objectives is to boost the visibility of its indexed journals to increase their impact. Held in 2023, the event “25 years of SciELO: Open Science with IDEIA” highlighted, in addition to the journals’ “impact”, the principles of “diversity, equity, inclusion, and accessibility” that make up SciELO’s policy.

According to Abel Packer, “the success of the SciELO Network is an achievement of national research systems.” Currently, the SciELO network consists of collections from 15 countries, with two more in development, as well as the Public Health collection, the SciELO Data repository, the SciELO Preprints server, and SciELO Books. By late 2023 the network recorded 1,405 active journals, with 318 in the SciELO Brazil Collection.

The numbers of published articles are impressive. From 1997 to 2023, over one million articles were published by the journals that make up the network, whereas the SciELO Brazil collection recorded nearly 373,000.

Journals have a median “age” of 26 years in the SciELO network, and of 29 years in the SciELO Brazil Collection. RBSO, at 50 years, is in the 83rd percentile in the SciELO Brazil Collection and in the 84th percentile among SciELO network journals.

Comparing RBSO indicators with the set of Public Health journals on the SciELO Brazil Collection (n=8), the percentage of articles published in English and articles with authors affiliated with foreign institutions is lower in RBSO, with growth over the years. Conversely, attention is drawn to the access ratio per document, which was significantly higher in RBSO (2,161) compared with the set of the Brazilian Public Health journals (693) in the period 2021-2023 (Table 1).

**Table 1** Number of documents, accesses, and access ratio per document in the set of Public Health journals on the SciELO Brazil Collection and in the Brazilian Journal of Occupational Health (RBSO), from 2021 to 2023

	Journals	Documents	Accesses	Accesses per document
Public Health	8	29,785	20,649,860	693
RBSO	1	581	1,255,363	2,161

Source: Presentation by Abel Packer, February 28<sup>th</sup>, 2024

RBSO also stands out with its alignment with open science practices since the journal accepts preprints, publishes research data, and the gives credit to the editor responsible for peer reviewing published articles.

Starting from the proposal to create an online library during the ABEC Brasil event in 1996, the SciELO project evolved as a collective construction with important support from the Latin American and Caribbean Center on Health Sciences Information (BIREME/PAHO/WHO) and the São Paulo Research Foundation (FAPESP). From 1997 to 1998, the pilot project was developed; from 1998 to 2003, the core collection was formed; from 2013 to 2018, the web library was developed.

SciELO’s policy to promote journal compliance with open science principles began to be implemented in 2018. Its indexing criteria envisage full adoption of open science practices by the end of 2025. Research data management, informed manuscript evaluation, and increasing visibility and impact remain core challenges.

## Final remarks

The event recognized RBSO's relevance, quality and longevity as a journal that makes up the select group of Brazilian scientific journals with over 50 years of existence.

As recommendations for strengthening RBSO, in addition to increasing the number of published articles, the SciELO director suggested increasing participation of authors affiliated with foreign institutions and the number of review articles as possible strategies to increase the journal's impact. Another general suggestion for SciELO Collection journals is to publish the peer review reports.

The actions of SciELO, ABEC Brasil, and scientific editors ensure that Brazil plays a leading role in open science development, both regionally and globally. Open science aims to maximize research quality and visibility. Adoption of open science principles allows for ethical, integrity-based, and secure communication and sharing of research among all involved parties. For example, publishing data articles enables dataset authorship attribution, guidance for data reuse, increased research impact and visibility, and data preservation.

But the path to full adoption of open science practices is not easy. One major challenge is breaking down existing barriers, including the conservatism of some editors and researchers. Openness offers paths to expand dialogue between science and society. Topics within the scope of RBSO and its publishing institution, Fundacentro, are of extraordinary relevance to Brazil. Including open science practices in institutional research policies could provide gains in terms of scientific and social impact.

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