

Open Science – the limit between knowing and the power of knowledge



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The journal *Revista Gaúcha de Enfermagem*, following SciELO's orientation and according to a three-year strategic planning, has been adopting the principles that guide Open Science since 2020.

Open Science, which has been largely debated in academic and scientific environments as well as in government institutions and funding agencies, is actually an umbrella term that covers different meanings, practices and initiatives, and involves different perspectives, assumptions and implications, from the free availability of research results (open access) to the valorization and direct participation of nonscientists and non specialists in doing science, such as 'lays' and 'amateurs'. It is the so-called citizen science ⁽¹⁾.

This movement for Open Science has its departure points in the Budapest Declaration (2002), the Bethesda Statement (USA, 2003) and the Berlin Declaration (2003). Open Science was initially in favor of open access as a reaction to high prices practiced by scientific journal publishers, and it is nowadays understood as a 'movement of movements' ⁽²⁾. Such statements agree in the availability of scientific literature—specially when developed with public investments—on the Internet, allowing it to be accessed, read, printed, researched or referred and shared, contributing for the advancement of science. Following that movement, in Brazil, in 2005, the Brazilian Institute of Information in Science and Technology (IBICT), which is a research agency of the Federal Ministry of Science, Technology, Innovation and Communication (MCTIC), was the organization that conducted and represented the Movement for Free Access to Scientific Information and who launched the Brazilian Manifest for Free Access to Scientific Knowledge, on September 5th, 2005 ⁽³⁾.

Open Science's essential principle is that scientific knowledge should be free so others can collaborate and contribute with it, and that research data, laboratory notebooks and other research processes may be available for free to be used, reused and shared without legal, technological or social restrictions ⁽⁴⁾. 'Research data' includes all the records produced throughout the research process and that validate its results, including all forms of records, such as texts, images, figures, graphs, tables, data collection tools results, interviews, memos etc. However, there are specific cases or reasons that prevent data sharing, either due to privacy or safety issues or due to restrictions regarding intellectual property and/or legal conditions ^(3,5).

The adoption of Open Science by the scientific community has generated discussions in legal and economic fields regarding data production and appropriation. In this context, the Panton Principles ⁽⁶⁾, written in 2009 and declaring principles on open scientific data,

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advocate that there should not exist legal, financial or technical barriers in the access to scientific data, and that scientific publications should be available in public domain, because when there is limitation to the access of scientific data, there is, in a certain way, a sabotage in the very process of doing science.

In the planet's current social, economic and political context, discussions on Open Science also manifest concerns regarding ethical issues that are implied in the sharing of information and knowledge production. The intellectual property issue is found in practically all the Open Science field and meets resistance from researchers, not only due to the difficulty in learning how to deal with this new practice, but also due to power shifts that such changes often involve. More relevant than the changes in the way of practicing scientific activities are the changes in the relation between science and society, and even more, between knowledge and power ⁽¹⁾.

Surveys conducted with researchers from several teaching institutions in Brazil show a lack of consensus on Open Science adoption, specially in the topics of data and result sharing and the relevance of strengthening science in society ⁽¹⁾. Many scientists agree that the scientific production should be accessible to any person, for free, but they disagree on the moment of its dissemination ⁽³⁾.

Therefore, it is clear that this debate on Open Science still needs to find solid foundations to become a reality, ensuring that society as a whole has free access to the scientific production, showing the relevance of science for the development of a critic and reflexive society that will result for some in a shift in power, which will no longer remain exclusively with the researcher. However, it will also need to offer solid assurances on ethical and author rights for those who dedicate their time for building knowledge.

Nowadays, Open Science can be said to be a given reality, and as such it will demand new skills from the researchers, which go beyond simply from doing scientific research: above all, managing generated information and interacting with other players from multiple scenarios—which is not always an adopted practice—, such as legal experts, public policies agents, librarians, IT professionals and others, as well as with the lay community.

Therefore, the challenge to researchers remains: to relearn how to develop research not as their own production anymore, but as a tool to share knowledge, contributing to a more critic and reflexive society that begins to understand science as an essential tool to transform reality.

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