
Editorial

Commercialization challenges open science

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Open science is increasingly important not just within the research community, but also among decision-makers and citizens, the society at large. Recently, the UNESCO adopted a Recommendation on Open Science (2021),¹ highlighting principles including open and equal access to research publications, data and methods. The recommendation further emphasizes that open science infrastructures ‘should be not-for-profit and guarantee permanent and unrestricted access to all public’ as well as function ‘in the global and public interest and without market dominance on the part of any commercial entity’. Open science is a positive trend fostering scientific development and extending equal access to knowledge and its production at all levels from individuals to the global scene.

Unfortunately, negative trends, too, have hit the scientific community, putting restrictions on open science. Public health research offers a case underlining the importance of promoting and safeguarding the principles of open science and combatting their violations.

The toolbox of health research contains a range of established, validated and reliable methods, such as instruments and measures, which allow mapping, analyzing, monitoring and following up various domains of health and its determinants. Scholars working in public and not-for-profit institutions, such as universities, research institutes and health care, have been responsible for developing such instruments.

Originally, the instruments and measures for health research have been openly available. However, due to an adverse development over the last few decades, several key instruments have been fully or partially commercialized. Consequently, researchers face restrictions and high costs for the use of the instruments.²

Commercialization concerns key measures of health and well-being, such as the General Health Questionnaire (GHQ) on mental health,³ the Short Form 36 (SF-36) on general health, functioning and quality of life⁴ and the Job Content Questionnaire (JCQ) on work stress.⁵ These measures are well known to all health researchers and healthcare professionals, and they have been used in a plethora of studies globally.

The GHQ provides a good example of commercialization. The measure was adopted in the early 1970s and ever since it has been a major one in population studies on mental health and screening people with mental problems for treatment. However, a British commercial firm, Mapi Research Trust has acquired all rights for the GHQ and all users, be they academic, commercial or healthcare professionals, are equally subject to charges. Users need to register and buy a license. Additionally, a user fee is due, currently approximately 1 euro per each study participant. The firm does not announce details of the costs. The GHQ measure, managed by the Mapi Research Trust, contains literally the same questions as

Goldberg’s original one from 1972.³ Thus, the private firm has not participated in the development of the instrument in any way. Its role is solely limited to marketing and collecting fees, which can amount to high sums. For example, if a study with 10 000 participants includes three commercialized measures repeated three times, its costs for using the measures only may rise up to 100 000 euros.

The work stress instrument JCQ has been equally commercialized and is currently managed by a Danish firm Job Content Center Global ApS. The situation for the SF-36 has a two-sided nature. The RAND Institute manages an open version free of charges, whereas a US private firm, Quality Metric manages a practically identical SF-36 version, which is subject to charges. The commercial firms even threaten the non-paying users by legal action.

While open science covers also methods, instruments used in particular disciplines, such as public health research, have so far been largely ignored. The research community, including scientific journals and societies, should take better notice of the effects of commercialization, which has put previously open research instruments behind the paywall, thus violating the principles of open science advocated, among others, by the UNESCO.²

Nevertheless, the adverse development is not inevitable, and many other instruments and measures remain open for now. Parallel measures can sometimes replace the licensed ones, but just for new studies. However, examining changes over time or comparing populations is feasible only when identical instruments can be used. As a result of the commercial restrictions, huge resources spent on past research are in danger of being wasted, as important instruments can no longer be openly used.

We need a better picture of the coverage and trends of commercialization of research methods to be able to ward off further instruments to be put behind the paywall. Finally, the question is about unrestricted and not-for-profit infrastructure of science safeguarding high-quality and reliable scientific research and knowledge for all.

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