

To Print or not to Print?

Preprints and publication: how the Covid-19 pandemic affected the quality of scientific production

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An interesting paper recently published in *Peer J.* by Enrique Teran and coworkers casts light on a peculiar side effect of the Covid-19 pandemic that concerns the quality of articles that appeared as preprints in archives or as regular papers in peer-reviewed scholarly journals.¹

The authors report a detailed perusal of the scientific publications related to research on Covid-19 in a portion of the year 2020.

What emerges from the study is that over the total number of preprints uploaded in the archives' servers, that are not subjected to a formal peer-review process, only about 5.7% were later converted into regular articles and published in scholarly journals after a regular peer-review process. The statistics is based on a global sample of 5,061 preprints uploaded in three different archives.

The fast, almost immediate dissemination of experimental studies has certainly played an important role during the pandemic. In fact it was promoted by the International Committee of Medical Journal Editors.² Moreover, the World Health Organization³ and some journals require that manuscripts be shared as preprints before being sent to reviewers. In this way preprints are exposed to a public form of peer-review in real time.

Fast publication as preprints certainly helped different research groups to exchange data and interpretations, hypothesis and proposals for public health guidelines to secure a powerful response to the virus attacks.

However, a conversion of 5.7% from preprints to regular articles seems to be too low. This may be due to the emergence of more accurate studies, to repeated verifications of the presented data on different samples, and

to the very fast communications of results that made fresh data look like old and outdated findings.

But on the other hand, Covid-19 related topics are very delicate matters for their social and political consequences. No doubt they must be treated with extra care. So many fake news, accusations of conspiracies, distrust in official authorities' statements have filled newspapers and websites, including the social networks that in this specific case have probably shown the dreadful and terrific power of some people's madness and ignorance.

Peer-review requires time. Reviewers are often reminded and urged to return their comments within few days. We know that a “short lapse between submission and acceptance” is a very appreciated feature of scholarly journals. Authors are anxious to see their work published, and sometimes do not appreciate enough the benefit of an accurate review.

Teran's article also reports that between February and May 2020 about 17,500 articles have been published in peer-review journals indexed in PubMed, suggesting that even during the Covid-19 emergency, scholarly journals kept pace with an enormous pressure from the scientific community and publish their articles after a formal peer-review process.¹

Another interesting point is that articles published in scholarly journals received more attention and a higher citation rate than preprints. The citation count is one of the quantitative indicators of the scientific relevance of a publication (although not all citations may be positive).⁴

In conclusion, while the scientific communities have all the tools to confirm or reject the findings published in open access preprints, the same does not hold

for average non-specialized readers that sometimes take advantage of partial or limited results to discredit the conclusions of serious studies.

And in our democracies the recent events have proved that these differences between scientists and self-proclaimed “experts” do matter.

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