


## LETTER TO THE EDITOR

## Are articles on COVID-19 more cited? Bibliometric analysis in a Latin American biomedical journal

¿Tienen los artículos sobre COVID-19 más citaciones? Análisis bibliométrico en una revista biomédica de Latinoamérica

Hugo Arroyo-Hernández<sup>1</sup> 

<sup>1</sup> Universidad Ricardo Palma - Instituto de Investigaciones en Ciencias Biomédicas- Lima - Peru.



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**Corresponding author:** Hugo Arroyo-Hernández. Instituto de Investigaciones en Ciencias Biomédicas, Universidad Ricardo Palma. Lima. Perú.  
Email: hugoarroyo2007@gmail.com.

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Dear Editor

Since the beginning of the COVID-19 pandemic, editors of scientific journals have made an effort to publish papers on the topic as quickly as they can in order to disseminate findings on this new disease in a timely manner and produce evidence for health decision making. To this end, they have implemented strategies to streamline their processes without altering the rigor of the peer review process.<sup>1,2</sup>

The impact factor of articles published in scientific journals can be measured using various parameters; however, citations in other publications, such as journals, preprints, theses, technical papers, among others, are one of the main indicators.

In order to determine whether the articles on COVID-19 published in the *Revista Peruana de Medicina Experimental y Salud Pública* were more cited compared to other articles, an analysis was performed using Harzing's Publish or Perish 8.0 software. To begin, a Google Scholar search was conducted for papers published in 2019 and 2020 that had at least one citation up to the first week of November 2021; if the article published in English had additional citations, these were added to the article in Spanish. Cited articles were classified according to their type and whether or not they were related to COVID-19. In the statistical analysis, in which the dependent variable was the number of citations, medians with interquartile ranges were calculated based on the characteristics of the articles, and statistical differences were evaluated by means of the Mann–Whitney U test.

The search identified 120 cited articles, of which 63.3% were published in 2020; however, articles published in 2019 had a statistically higher median number of citations ( $p=0.032$ ). In turn, articles on COVID-19 (15.8%) had a statistically higher median number of citations ( $p=0.009$ ) than the other articles, with original articles ( $p=0.008$ ) and review articles on COVID-19 ( $p=0.046$ ) being the most cited (Table 1).

This finding shows that the articles on COVID-19 published in 2020 in the *Revista Peruana de Medicina Experimental y Salud Pública* were more cited than the articles published in 2019, which could be mainly related to the exponential growth that publications on this disease have had in Latin America.<sup>3</sup> When comparing the number of citations that articles receive in a journal, it is expected to vary depending on the quality of the study and the relevance of the results obtained. However, in a study analyzing citations in three high-impact medical journals (*New England Journal of Medicine*, *Journal of the American Medical Association*, and *Lancet*), Zdravkovic *et al.*<sup>4</sup> found that original articles on COVID-19 had higher citations than non-COVID articles, but that the quality of the research was lower than in those previously published.

**Table 1.** Characteristics of articles cited in the Revista Peruana de Medicina Experimental y Salud Pública. 2019-2020.

Characteristics		Articles	Citations		p-value *
		n (%)	Median	(IQR)	
Year of publication (n=120)	2019	44 (36.67)	7	(2-12)	0.032
	2020	76 (63.33)	3	(1-9)	
Articles on COVID-19 (n=120)	No	101 (84.17)	3	(2-9)	0.009
	Yes	19 (15.83)	11	(3-1)	
Original articles on COVID-19 (n=69)	No	64 (92.75)	3	(2-9)	0.008
	Yes	5 (7.25)	11	(11-40)	
Review articles on COVID-19 (n=6)	No	3 (50.0)	3	(3-6)	0.046
	Yes	3 (50.0)	36	(11-81)	
Other articles on COVID-19 (n=45) †	No	34 (75.56)	3	(2-9)	0.708
	Yes	11 (24.44)	3	(2-11)	

IQR: interquartile range.

\* Mann–Whitney U test.

† including letters to the editor, symposia, featured articles, and editorials.

Source: Own elaboration.

Although it is beyond our scope to identify the quality of original articles on COVID-19, it could be concluded that the research conducted in developing or middle-income countries was mainly aimed at providing information on the epidemiology, clinical or diagnostic characteristics and treatment of the disease, as demonstrated by Espinosa *et al.*<sup>5</sup> in a bibliometric study in which they analyzed research on COVID-19 in Latin America and the Caribbean. On the contrary, in countries with more investment and a better research infrastructure, research with more elaborate designs was carried out from the beginning.

It is worth noting that research conducted in developing countries is very likely to have played a significant role in the generation and validation of knowledge about the disease at an early stage of the pandemic in Latin America. It is also worth pointing out that, according to authors such as Ruano-Ravina *et al.*,<sup>6</sup> review articles are the most cited.

Citation analysis allows assessing the use of research by the academic community, showing that it is more likely that we are dependent on the generation of knowledge that is published in high impact journals and that citations of COVID-19 research published in Latin American journals have been made mainly in journals from the same country or that make publications in the Spanish language. Further studies could explore citation networks between research areas and assess in detail the impact of COVID-19 research conducted during the pandemic in Latin America.

### Conflicts of interest

The author is a member of the editorial board of the Revista Peruana de Medicina Experimental y Salud Pública.

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