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Authorship characteristics of retracted COVID-19 articles

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As new variants continue to emerge and the spread of the virus continues to pervade all nations and evade efforts to contain it, it appears that COVID-19 will likely remain a long-term issue. Since the publication of new scientific research findings is crucial for the decisive fight against this disease[1], researchers have published thousands of articles in a wide range of fields of knowledge to help better understand and navigate this crisis. Following the explosion of publications in this period, some of the published articles were retracted by the authors or editors of journals. Reasons such as the global rush to gain more knowledge, the rapid increase in scientific outputs, the carelessness of researchers, and the reduction in time and quality of the peer reviews led to the growth of these retracted articles[2]. Such articles can potentially endanger the health and evidence-based planning for those impacted by the coronavirus[2]. The growth and sensitive nature of retracted papers led to bibliometrics studies on them, although few[3,4], which focused more on the level of documents. Since the authors are the creators of scientific publications, examining their characteristics can complement the previous studies[3,4] for a broader insight about retracted COVID-19 articles. To address the gap in our knowledge of authors of retracted articles, we reflected authorship characteristics of these articles in this paper.

We explored the retracted COVID-19 articles from the link https://retraction-watch.com/retracted-coronavirus-covid-19-papers/. Also, we searched in PubMed and Scopus on March, 1, 2021 by include keywords: "COVID-19" or "coronavirus disease 2019" or "coronavirus 2019" or "SARS-COV-2" or "2019-nCov". After removing the duplicate papers, 54 retracted COVID-19 articles remained. It is worth noting, several articles were in "Temporarily retracted", "Expressions of concern" sections ignored, same study by Soltani and Patini[4]. Also, according to the Retraction Watch website (www.retractionwatch.com), we made no distinction between withdrawal and retraction, because journals' system not always reflects what the papers retract, and to sometimes make a paper disappear without a trace. After identifying the papers, we evaluated the authors of papers by academic degrees, retraction background (in Retraction Watch Database and Scopus), and metrics overview from Scopus (documents by author, citations, and h-index), gender (first and last authors). We searched authors manually in Google (like the academic profile, ResearchGate, Google Scholar, and other official ways).

Table 1 displays the findings for characteristics of authors of retracted COVID-19 articles. Gender of authors of retracted COVID-19 articles is roughly equal to overall authorship of all COVID-19 articles (1): 20-46%, depending on medical specialty, for a woman first author, with a median of 31%; 13-37% for a woman last author, with a median of 29%. 81% of authors have completed a PhD or MD program. Most authors

Table 1: The characteristics of authors of COVID-19 retracted articles

Gender	First authors	Male	73%
		Female	27%
	Last authors	Male	72%
		Female	28%
Job Role	MD		32%
	Professor		25%
	PhD Candidate		25%
	MS Student		9%
	Post-Doctoral Fellow		3%
	College student		2%
	MD Student		2%
	Program Director		2%
Previously Retracted Paper?	Yes		33%
	No		67%
Authors per documents	Mean		6
	Median		5.5
	Minimum		1
	Maximum		24
Number of documents by author	Mean		61
	Median		17
	Minimum		1
	Maximum		518
Citations	Mean		3159
	Median		232
	Minimum		0
	Maximum		70422
H-index	Mean		12
	Median		6
	Minimum		0
	Maximum		80

(based on median figures) are moderately accomplished, with a couple of dozen documents published in their career, a few hundred citations, and an h-index of 8. Retracted articles averaged 5 and 6 authors each, which is similar to the average number of authors on all articles published in medical journals over the past five decades.

The results show that all demographics appear normal. However, there is concern about the background of researchers in the production of retreat articles because in this small community (n=59) about 20% of them have other retreat articles in their CV. The retracted COVID-19 papers have a similar number of authors to the traditional medical article, such that there should be plenty of minds and eyes looking over the paper and mitigating the likelihood that a retraction would need to occur (though this is clearly not the case). However, the number of authors of retracted COVID-19 articles in this study is higher than the number of authors of COVID-19 articles[5], which shows that increasing the size of authorship team does not necessarily reduce the probability of retraction of articles. Continued research about retracted COVID-19 articles can continue to help prevent the further dissemination of questionable research findings.

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