

REFERENCES

1. Jovell AJ, Navarro-Rubio MD. Evaluación de la evidencia científica. *Med Clin (Barc)*. 1995;105:740–743.
2. Guyatt GH, Sackett DL, Sinclair JC, Hayward R, Cook DJ, Cook RJ. Users' guides to the medical literature. IX. A method for grading health care recommendations. Evidence-Based Medicine Working Group. *JAMA* 1995;274:1800–1804.
3. Manterola C, Asenjo-Lobos C, Otzen T. Jerarquización de la evidencia. Niveles de evidencia y grados de recomendación de uso actual. *Rev Chil Infectol*. 2014;31:705–718.
4. SIGN. SIGN 50: A guideline developer's handbook. Scottish Intercollegiate Guidelines Network, 2011. Available at: <https://www.sign.ac.uk/our-guidelines/sign-50-a-guideline-developers-handbook/>. Accessed August 17, 2020.
5. Murad MH, Asi N, Alsawas M, Alahdab F. New evidence pyramid. *BMJ Evidence-Based Medicine* 2016;21:125–127.

Characterizing the Effect of the COVID-19 Pandemic on the Plastic Surgery Literature

The coronavirus disease of 2019 (COVID-19) pandemic has dramatically impacted the plastic surgery community across the globe, and it has been the center of discussion in public and private discourse throughout the year.¹ Given this deep interest in the COVID-19 pandemic, we hypothesized that articles related to the COVID-19 pandemic in the plastic surgery literature would garner higher levels of attention than other articles.

Using the *Journal Citation Reports*, 15 plastic surgery journals with the highest impact factor in 2019 were selected and all articles published in these journals in 2020 were extracted.² For the 6815 articles identified, number of citations accrued and Altmetric score, which is a weighted calculation of the attention an article receives online, were recorded.³ COVID-19–related articles were identified by searching titles for “COVID,” “SARS,” “pandemic,” “corona,” “COVID-19,” or “SARS-CoV-2,” resulting in a total of 220 articles (3.2 percent). The Kruskal-Wallis test was used to assess Altmetric score and citations for COVID-19–related versus non-COVID-19 articles. For the COVID-19–related articles, we also assessed whether Altmetric score and citations varied by the type of article (commentary, original article, or guidelines), subspecialty of plastic surgery to which the article pertained, and the quarter of the year in which it was published.

Despite the pandemic being a hot topic of discussion, the majority ($n = 137$, 62 percent) of COVID-19–related articles had an Altmetric score of zero, meaning they were not disseminated at all on social media, news outlets, or other electronic forms of media. When compared to non-COVID-19 articles, however, COVID-19–related articles had a higher average Altmetric score (2.1 versus 1.4, $p < 0.001$, Fig. 1). Of the COVID-19–related articles, original articles had higher Altmetric scores as compared to editorials and guidelines (3.8 versus 1.3 and 1.5, respectively, $p < 0.001$). There was no association between Altmetric score and specialty ($p = 0.24$) or quarter of publication ($p = 0.40$).

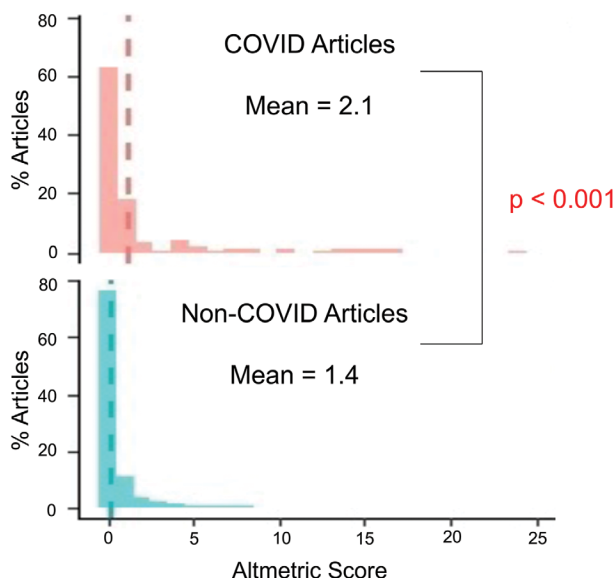


Fig. 1. Altmetric score by article type. COVID-19–related articles had higher Altmetric scores than non-COVID-19 articles.

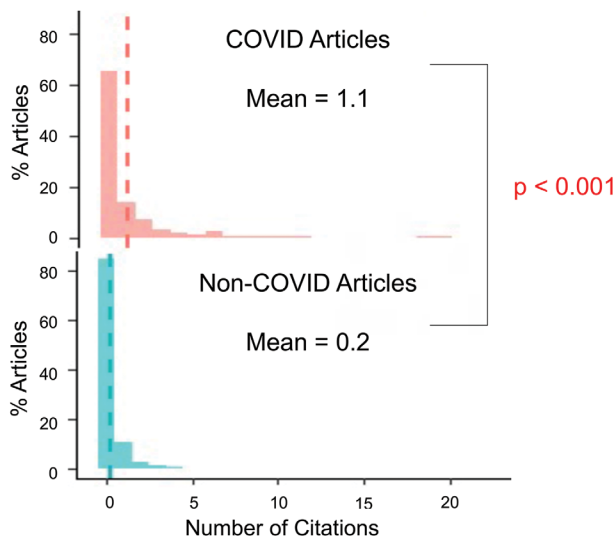


Fig. 2. Number of citations by article type. COVID-19–related articles accrued more citations than non-COVID-19 articles.

COVID-19–related articles accrued a total of 247 citations, with an average of 1.1 citations per article, which is higher than the 0.2 citations non-COVID-19 articles accrued ($p < 0.001$) (Fig. 2). Among the COVID-19–related articles, over 65 percent of articles had zero citations and four articles alone accounted for 24 percent of all citations. Articles published earlier in the year had more citations than those published later ($p < 0.001$), which is expected as it takes time for articles to accrue citations. There was no association between number of citations and specialty ($p = 0.16$) or article type ($p = 0.27$).

The high levels of interest in the COVID-19 pandemic were reflected in the plastic surgery literature. Altmetric score, a surrogate for interest and influence, was higher for COVID-19–related articles and highest for

studies that analyzed original data.¹ Impact, as measured by citations, was also higher for COVID-19–related articles, suggesting there was increased discussion among academics about the pandemic and its ramifications on plastic surgery. The impact and influence of the COVID-19 pandemic were felt by the plastic surgery community worldwide and also depicted in the literature.

DOI: [10.1097/PRS.00000000000008916](https://doi.org/10.1097/PRS.00000000000008916)

Carter J. Boyd, M.D., M.B.A.

Hansjörg Wyss Department of Plastic Surgery
NYU Langone
New York, N.Y.

Kshipra Hemal, B.S.

Wake Forest School of Medicine
Winston-Salem, N.C.

Jonathan M. Bekisz, M.D., M.Sci.

Ara A. Salibian, M.D.

Mihye Choi, M.D.

Nolan S. Karp, M.D.

Hansjörg Wyss Department of Plastic Surgery
NYU Langone
New York, N.Y.

Correspondence to Dr. Karp
Hansjörg Wyss Department of Plastic Surgery
NYU Langone
222 East 41st Street
New York, N.Y. 10017
nolan.karp@nyulangone.org

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

REFERENCES

1. Rohrich RJ, Hamilton KL, Avashia Y, Savetsky I. The COVID-19 pandemic: Changing lives and lessons learned. *Plast Reconstr Surg Glob Open* 2020;8:e2854.
2. Boyd CJ, Ananthasekar S, Kurapati S, King TW. Examining the correlation between altmetric score and citations in the plastic surgery literature. *Plast Reconstr Surg*. 2020;146:808e–815e.
3. Altmetric. What outputs and sources does Altmetric track? Available at: <https://www.altmetric.com/about-our-data/our-sources/>. Accessed December 27, 2020.