

EDITORIAL COMMENT

Social Media and Assessing the “Impact” of Medical Publications*



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The Impact Factor, a measurement of the number of citations received, has been and continues to be the primary metric by which the quality, strength, and importance of medical journals is determined. It has served as the “ejection fraction” of journals. However, the Impact Factor has many imperfections, one of the most prominent being that it is greatly influenced by guideline-type documents. In addition, it reflects the influence of an article on the medical profession rather than on society as a whole.

In an attempt to overcome some of the limitations of citation-based indices and to reflect the overall effect of research on society more accurately, a new category of measurement, termed *Altmetrics*, has been developed. Altmetrics consist of references to research in other than medical publications such as in the media and lay press, online blogs, Wikipedia, and social networks such as Twitter. Although not devoid of limitations such as self-citation, Altmetrics are an attempt to convey how often research findings are viewed, discussed, and used throughout the world. In recognition of the growing importance of non-citation-related dissemination of research data, medical journals and meetings have increasingly reached out to inform the lay media and social networks of their content and material. In this way they have succeeded in amplifying the impact of the reported research.

In this issue of *JACC Case Reports*, Khan et al. (1) report on the relationship of social media with the

conventional citation-based Impact Factor. They find that cardiologists in general are not very active on Twitter, and this is reflected in the fact that cardiologists’ mentions on Twitter are low relative to their citations in medical journals (low Kardashian index). Shahzeb Khan et al. (1) find that interventional cardiologists and electrophysiologists are more active on Twitter. Significantly, they report that, despite its other favorable effects, the presence on social media does not appear to have a beneficial effect on the Impact Factor.

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That cardiologists in general are not very active on social networks such as Twitter is perhaps not surprising. We tend to be consumed to a great extent with clinical work and have difficulty finding time for medical journals, much less Twitter. This finding is also consistent with past surveys that have shown that most cardiologists still prefer to read their journals in print rather than online. Khan et al. (1) do not provide any data on whether participation on Twitter is related to cardiologists’ age. However, their speculation that social media participation is likely to change as younger physicians comprise a higher percentage of the workforce is reasonable.

Khan et al. (1) cite publications indicating that participation on social media such as Twitter may increase awareness, dissemination, and discussion of research data, but this participation does not seem to affect the Impact Factor. This finding is predictable because social media mentions largely originate from the lay public, who do not publish in the medical journals from which the Impact Factor is derived. Twitter mentions and journal citations are a bit like apples and oranges. However, a larger question concerns the relative value and importance of medical citations compared with social media mentions, and in fact compared with all sources of Altmetrics.

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Research findings certainly resonate to a greater extent and can have a wider effect when they are disseminated on social networks and media. However, the misinterpretation or exaggeration of importance of research findings has the potential for adverse consequences when these findings are transmitted on social media.

Given the imperfections of the Impact Factor and its focus on the medical community, it is likely that alternative measurements of the quality and importance of research articles and medical journals will increasingly be based on nonmedical sources. It is very possible that Altmetrics, or some similar metric,

will displace the Impact Factor and become the “ejection fraction” of medical journals in the future. If this is the case, in addition to the potential benefits, the necessity for researchers to become more active on Twitter and other social media will indeed become much greater.

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1. Khan MS, Shahadat A, Khan SU, et al. The Kardashian index of cardiologists: celebrities or experts? *J Am Coll Cardiol Case Rep* 2020;2:330-2.

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