



Editorial

Has social media changed the barometers of professional validation?

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Since the publication of the first scientific journal Philosophical transactions in 1665, scientific publishing has evolved and reinvented itself in many ways. Formal referee systems were concretized in the decades following the second world war and the system has grown and flourished with the advancement of technology, leading to organized online submission and structured peer review systems.¹

The exponential increase in the no. of journals and publications has raised the question that publications serve the purpose of the authors more than the cause of science. Nevertheless the publication ecosystem has flourished and numerous metrics have been introduced, reinvented and employed as a barometer of research excellence and is a point of keen interest to researchers, journals, publishing houses, educational institutions and ranking organizations.

A new metric that has been added to this complex system is social media. Social media is a phenomenon which has rapidly and drastically changed the behaviour of the human race. Wikipedia describes social media as interactive technologies that facilitate the creation, sharing and aggregation of content, ideas, interests, and other forms of expression through virtual communities and networks. This could be social media platforms like Facebook, Twitter, Instagram, WhatsApp and several others which could serve more lofty purposes than that of casual socialization. There are also professional networks like Academia, LinkedIn,

and ResearchGate; blogs and content providers like YouTube.

While behavioural scientists have expressed concern that social media has led to an inordinate seeking of external validation and might also lead to mental illness, it is also true that Social Media has evolved into a dynamic platform to facilitate professional development and engagement, society updates, announcements, community building, advocacy and patient education thus helping to combat lack of information or misinformation.

More and more researchers are turning to social media and use it in various aspects of their work flow. While the primary purpose of research is to enhance patient care it is believed that of the many millions of articles published 90 % are never cited and only 50 % are read.² While in a previous era, publications were merely read by those in the relevant circles and employed a pull model with citations taking years to accumulate, it is now believed that pushing out research on social media might improve the reach of the work. An important factor that has also been recognized is that social media provides a more level playing field since it gives to under-represented minority members of the profession such as junior researchers and women, a means of expression.³ It also fosters an environment for dialogue, discussions and collaborations. Professional platforms like Research Gate and Academia help researchers keep track of their work in terms of reads and citations, be aware of what their peers are working on, and promotes networking and collaboration.

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Bibliometrics like citation count, journal impact factor (JIF) and h-index amongst others have been considered important strikeout markers of the impact of the research.⁴ Citations are still desirable for the aspirational researcher/journal /institutions and it is believed that sharing research on social media not just increases citations but the citations are also accrued faster.⁵ Although the presence of orthodontic journals on social media is variable in terms of presence on major social media platforms, most major orthodontic journals have a social media sharing link on their web pages which helps to highlight the journal, authors and the area of work.⁶

Thus, the need for new measures of scientific impact in addition to conventional metrics i.e alternate metrics (altmetrics) has become important. Altmetrics as a term was coined in September 2010 by Jason Priem, a doctoral student at UNC- Chapel Hill's School of Information and Library Science who sought to create a set of metrics that could draw a connect between the social aspects of the web and the spread of scholarship online.⁷ Unlike citations which take years to accumulate they are instant and have a diverse impact on clinical practice, education, public policy, and they create a buzz and popularity around the concept or work.

While there are numerous altmetric aggregators i.e online tools calculating metrics for scholarly materials, Altmetrics (Altmetric LLP, London, UK) is the most associated with many major orthodontic journals and these journals have integrated altmetric badges into their web pages.⁶ The Altmetric algorithm produces a weighted score, the Altmetric Attention Score (AAS) also called the Altmetric donut which reflects the relative contribution of each source.

The correlation between conventional metrics and altmetrics is a natural question that comes to mind and this has been evaluated with a mixed outcome, failing to really establish a positive correlation.^{8,9} This relationship with respect to orthodontic literature has also been inconclusive with some studies failing to establish a correlation between conventional metrics and altmetrics.^{10,11} However a recent study did find that increased social media mentions was associated with Scopus and WOS citations.¹² While the relationship between altmetrics and conventional metrics is measurable and apparently variable, it may be debated that the measure of social media presence of a work is not truly representative of the academic quality of a work or the importance of the research to healthcare. One recent study found that the type of social media platform, number of citations, impact factor, and study type were among the most influential characteristics of AAS however study quality had no bearing on the AAS.¹³ Social media metrics are considered more fluctuant and easily influenced by various extraneous factors and it may be argued that mere online presence is not truly representative of intellectual

credibility or engagement. Therefore it is recommended that researchers share their work more on professional social media platforms like Mendeley or ResearchGate so that it would be read and referred by those in the relevant professional circles.⁶

Nevertheless, social media has been put to good use for advocacy which is not just the right but also the duty of health professionals and professional organizations. It helps to inform the stakeholders on current updates and trends and helps to fight misinformation. The campaign against Direct to Consumer aligners by the Indian Orthodontic society is one such example. During the recent covid pandemic, information and networking was vastly facilitated by social media. It is also true that several journals and organizations have converted research findings into novel visuals and these when shared with the public helps to deliver important nuggets of information about the research findings.

However, there are downsides to social media use also. Concern has been expressed that it leads to narcissism and self-centeredness, impacts real world interactions and takes up an inordinate amount of time in an already busy professional life. Different work environments might take a variable view of their employees spending time on social media.

It also potentially increases the risk of unprofessional behaviour since sharing patient records on social platforms might lead to patient privacy violations. Any patient information identifiable or not can only be shared with patient consent and in line with local institutional or government policies.¹⁴ However the constant seeking of external validation and the pressure to market might lead to indiscreet oversharing.

Although many journals encourage their authors to share their work on social media, the author initiated or otherwise to social media must take care to read the fine print communicated by the journal and these guidelines would vary depending on whether the article has been published under an open access model or a subscription model. Cavalier sharing without paying attention to the publishing agreement might lead to copyright infringements. It must be accepted that there are financial overtones to scientific publishing and when unsure it is best to share merely the meta data and provide the link to the article on the journal site.

Thus like the lines of Bob Dylan's famous song "The Times They Are A-changin'", the academic in the lofty portals of science in addition to procuring various skill sets also needs to embrace and navigate the challenges of social media because.

"If your time to you is worth savin'
and you better start swimmin'
Or you'll sink like a stone
for the times they are a-changin'"


Conflict of Interest

None.

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