EDITORIAL

Plagiarism, P-hacking, and Predatory Journals: Toxic Triple Ps of Scientific Publications

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The advent of digitalization has led to a rapid surge in literary publications. The increase in publications has not been matched by adequate screening from regulatory authorities. This, in turn, has caused a surge in unverified scientific data. Digital literature serves as the most predominant source of information for students of this generation. Although sources for the literature mandated in the curriculum are enlisted by the Institution, such guidelines do not extend for online sources. The major reason for students referring to invalid sources of information is due to the simplicity of presentation which is generally accomplished by the intentional/unintentional omission of key elements of the original work.

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Apart from the toxic accumulation of unverified information, there are more severe challenges faced by the academic community in the form of plagiarism, P-hacking, and predatory journals. Plagiarism has been a common problem in academic circles. Although most of the plagiarized work is often filtered using 'plagiarism detection soft-wares', there are still a significant number of plagiarized articles that bypass this vetting system. Referring to such plagiarized literature could, in turn, jeopardize the authenticity of the work carried out by the referee. Thus, it is essential that any literary work irrespective of the reputation/seniority of the author be thoroughly vetted by the respective institutions before submission, and by the publishers during initial screening. Lack of an adequate vetting mechanism has led to the publication of plagiarized work which when exposed becomes retracted degrading the reputation of not only the authors but also their parent institutions and the publishing journal.[1]

In addition to plagiarism, another common source of toxic literature is P-hacking. The cause for P-hacking is rooted in the nature of acceptance by most publishing bodies. Research showing greater statistical significance (p values) is often preferred for publication. This has eventually led to the employment of P-hacking to manipulate research data to obtain statistical significance. Any seemingly genuine work based on such P-hacked data must be disregarded as it represents 'fruit of a poison tree'. Each such poisonous element is a 'bad seed sown in the soil-of-science', which ultimately degrades research quality by misleading many future authors in their respective fields. Similar to screening plagiarism, there are also tools to detect P-hacking. Thus, it is vital that publishers employ effective screening for P-hacking issues in addition to simple plagiarism detection software for all submitted literary works.[2,3]

Last but not least is publishing in predatory journals. Predatory journals are journals which do not employ a

standard peer review process to validate the authenticity of submitted work. Their intentions are purely commercial, and focus is on a collection of heavy article processing charges (APC). Such journals also lack genuine indexing partners.

Moreover, they follow an open-access system, allowing them to charge a large sum of money from their authors. For long, predatory journals have misguided genuine academicians even from reputed institutions. It is disappointing that scientific publishing has turned into a business model, lacking in moral code. Although many authors are genuinely unaware of the journal's predatory nature! It is important to acknowledge that a certain percentage of authors intentionally submit to such journals due to the poor quality of their findings. In many such cases, articles are either heavily plagiarised, or have been P-hacked to obtain favorable results. As the primary focus of predatory journals is in favor of high APC, they do not subject their submissions for quality check, allowing a free reign for researchers to publish articles irrespective of quality.[4]

To avoid accumulation of toxic literature, it is essential that all academic institutions screen for quality of research papers and that of the publishing journal, and render recommendations for promotions and incentives based on quality rather than sheer quantity of publications! To conclude, given the increasing accumulation of toxic literature, it is of utmost importance that educational institutions and faculty offer adequate guidance to their students who will be the future academicians and researchers on the need for 'moral and ethical conduct' in Science.

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