

Editorial

“Publish or Perish”: How predatory journals threaten scientific integrity in India

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INTRODUCTION

In today's rapidly advancing scientific landscape of research and academia in India, the “pressure to publish” has become a dominant force driving academic careers, research outputs, and institutional reputations.^[1] This desperation to publish is often fueled by the necessity as an eligibility criterion for promotions and continuation of tenure and funding. This has culminated in an overwhelming focus on quantity over quality.

In addition, this pressure has come with its deleterious consequences. Some psychologists consider publication pressure to be a form of psychological stress which can lead to diminished ethical decision-making and risky behavior such as scientific misconduct.^[2]

One of the most alarming side effects of this culture is the proliferation of “predatory journals” – exploitative entities that prey on researchers' desperation to publish, undermining the integrity of scientific research.^[3] While India is making strides in science and technology, it is critical that we address these issues from both ethical and regulatory perspectives to preserve scientific integrity and protect researchers from exploitation.

THE SURGE OF PRESSURE TO PUBLISH IN INDIA: A GROWING CONCERN

Globally, the academic world has long been giving emphasis on the maximum number of publications an individual researcher can produce, rather than, the quality, the depth and the rigor of the actual work itself! In India, the “publish or perish” mentality is deeply embedded in the academic culture. This pressure is exacerbated by a highly competitive academic environment, where publication output is often the sole criterion for assessing the quality of a researcher's work. The increasing reliance on bibliometrics, such as the h-index, impact factors, and citation counts, to evaluate the researcher has played a major role in amplifying this pressure and thus alarmingly worsening the situation.^[4] These metrics, though useful to some extent, have inadvertently contributed to a superficial understanding of scholarly contributions, encouraging a focus on publishing as many papers as possible, rather than prioritizing novel and impactful research. Institutions, funding agencies, and regulatory/government bodies often prioritize quantitative output, inadvertently fostering a climate in which research quality takes a backseat to the number of publications.

This publication pressure is not confined to any particular field. Researchers in disciplines such as medicine, engineering, and life sciences, among others, find themselves racing against the clock

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to meet these demands. For many researchers, especially early-career scholars, like junior faculty in medical teaching institutions, the pressure is palpable. Publishing in indexed journals is an absolutely necessary eligibility criterion for promotion from Assistant professor to Associate professor and Associate professor to Professor, especially under the directives of regulatory body, National Medical Commission. With limited resources and minimal sponsorship/mentorship, they may struggle to meet the expectations set by their institutions or regulatory bodies. This high-pressure environment has created a breeding ground for predatory journals, which are more than willing to exploit the vulnerabilities of such researchers.

WHAT ARE PREDATORY JOURNALS?

How are they exploiting vulnerability and pose a growing threat?

Predatory journals are fraudulent, deceptive entities/publications that masquerade or falsely portray themselves as legitimate scholarly/academic journals while prioritizing profit over the ethical editorial integrity and peer review standards necessary for credible scientific publication.^[5] These journals operate on a business model that charges authors hefty fees for publication without offering meaningful editorial or peer review processes. Their main objective is financial gain with high “article processing charges” (APC), often preying on inexperienced researchers/desperate medical faculty from developing countries like India, who are under pressure to fulfil publishing requirements but may not be fully aware of the exploitation tactics employed by these journals. Other features are that they lack transparency in their editorial process, often with no discernible peer review panel or editorial board, do aggressive solicitation, fake the peer review process, and forward the wrong or misleading information about editorial board and indexing. Many researchers may not realize that these journals do not meet the rigorous standards of scientific publishing.^[3]

The rapid rise of these predatory journals, which exploit this publication pressure, has become a significant threat to the scientific community in India. The papers published in these journals are often riddled with flaws, ranging from poor methodologies and data manipulation to outright plagiarism. Because these journals lack rigorous peer review, the quality of research they publish is often substandard, making it difficult for others in the scientific community to rely on such findings. This undermines the trust in scientific research and jeopardizes the advancement of knowledge from India, in the eyes of global academic community.

From a regulatory perspective, the lack of clear guidelines, any controlling mechanism, or specific punitive actions and oversight has allowed predatory journals to proliferate. As

a result, they contribute to the publication of substandard, unreliable, or even fraudulent research. This is particularly concerning in fields such as healthcare/medicine and engineering, where false or manipulated data can have seriously disastrous consequences.

The implications of publishing in a predatory journal

Publishing in a predatory journal can damage your reputation and that of your affiliated institution. The publication of low-quality or fraudulent research in predatory journals has far-reaching consequences. Not only does it dilute the quality of the scientific record but it also undermines the public's trust in research. In an era where dissemination of misinformation and “fake news” is rampant, the scientific community cannot afford to erode its own credibility. When policymakers, healthcare professionals, and the general public rely on scientific findings to make critical decisions, the repercussions of false or misleading research can be catastrophic.

Moreover, researchers who fall victim to predatory journals are often stuck with the stigma of having published in questionable outlets and this can be considered as a form of academic misconduct, potentially damaging their professional reputations. This can have long-term consequences for their careers, as their work is not regarded as credible by their peers.

REGULATORY PERSPECTIVES

To combat the rise of predatory journals and safeguard scientific integrity, it is essential for all stakeholders – researchers/faculty members, academic institutions, and publishers, as well as regulatory/government and funding agencies – to act.

Ethical perspective: Protecting the scientific integrity of research

From an ethical standpoint, the rise of predatory journals poses a serious threat to the veracity and credibility of scientific research. Ethical standards in publishing are crucial for ensuring that research findings contribute positively to societal progress rather than mislead or harm the public.

- 1. Awareness and education:** Novice researchers, particularly younger medical teaching faculty, need to be educated about the risks of predatory publishing. Training on how to identify credible journals, the importance of peer review, and the ethical considerations involved in publication is crucial. Institutions should provide resources and workshops to help researchers make informed decisions when choosing where to publish their work.
- 2. Publishing standards and ethical guidelines:** Journals themselves must adhere to ethical publishing standards. Transparency in editorial and review processes, as well

as clear guidelines on APC/publication fees, can help separate legitimate journals from exploitative ones.

3. **Ensuring rigorous peer review:** Peer review remains the gold standard or the cornerstone in maintaining the integrity of scientific publications. Peer-reviewed journals ensure that research undergoes critical evaluation by experts in the field before it is disseminated to the public. In contrast, predatory journals bypass this process, leading to the publication of flawed or fabricated research. This undermines the reliability of scientific knowledge and can have far-reaching consequences, particularly in critical areas such as healthcare, policy, and technology.
4. **Plagiarism and data manipulation:** Predatory journals often allow or even encourage unethical practices such as plagiarism, data manipulation, and fabrication. This compromises the entire scientific endeavor, as research is meant to be a transparent, honest process aimed at advancing knowledge for the greater good. The lack of oversight and accountability in these journals allows such practices to go unchecked.
5. **Academic responsibility:** Researchers have an ethical responsibility to ensure that their work is published in journals that adhere to high standards of academic integrity. While the pressure to publish may tempt researchers to choose the quickest or most accessible publication route, they must weigh the long-term consequences of publishing in disreputable journals. Researchers must understand that their work is part of a larger scientific conversation, and publishing in a predatory journal can damage their professional reputation and diminish the impact of their research.
6. **Informed consent:** Ethical publishing also includes ensuring that authors, particularly those from underrepresented regions or institutions, are fully informed about the journal they are submitting to. Predatory journals often manipulate authors into submitting papers by hiding high publication fees and failing to disclose the lack of peer review or editorial oversight. Providing clear, transparent information about the risks of submitting to such journals is crucial in maintaining an ethical research environment.

Regulatory perspective: The role of institutions and government

The regulatory landscape in India currently lacks comprehensive mechanisms to tackle predatory publishing, especially for the medical research! While several academic bodies, such as the University Grants Commission and the Department of Science and Technology, have established criteria for research funding and academic standards, they have yet to fully address the issue of predatory journals.

1. **Urgent requirement of clear regulations/laws:** One

of the primary challenges in curbing the growth of predatory journals is the absence of clear, enforceable regulations to guide ethical publishing practices. While some organizations, such as the Indian Council of Medical Research and the Indian National Science Academy, have ethics guidelines for conducting and publishing research, there are no national regulations specifically addressing the identification and elimination of predatory journals.

2. **Vetting journals and publishers:** Academic institutions and funding bodies should actively vet journals and publishers collaborating with them. Utilizing databases like the “Directory of Open Access Journals (DOAJ)” or checking/collaborating with the credentials of a journal on independent platforms that are successors too “Beall’s List of predatory journals” or the International Association of Scientific, Technical, and Medical Publishers can help identify and avoid predatory outlets.^[6]
3. **Need for a national framework:** A national framework that outlines criteria for legitimate journals, including transparency in the editorial process, peer review, and publication ethics is essential. Such a framework could be similar to international standards such as the DOAJ or Committee on Publication Ethics, which list journals that adhere to high ethical standards.
4. **Training and capacity building:** Regulatory bodies must also focus on building capacity within academic institutions. Providing researchers with training on how to identify legitimate journals and avoid predatory ones should be part of academic curriculum and workshops.
5. **Accountability and enforcement:** Regulatory bodies need to enforce accountability by monitoring the journals that researchers are publishing in, particularly when it comes to those receiving government grants or funding. This could be incorporated into the research output evaluation process to ensure that the quality and credibility of the journals are evaluated alongside the quantity of the publications.

Epilogue

The publication pressure in modern academia, compounded by the rise of predatory journals, poses a real and growing threat to the integrity of scientific research. While the quest for knowledge and advancement is noble, it must not come at the cost of the truth. To preserve the credibility of science and safeguard the reputations of researchers, it is essential that we take a stand against exploitative publishing practices and work collectively to uphold the standards of scholarly research. By educating researchers, holding journals accountable, and fostering a culture of quality over quantity, we can ensure that the scientific community remains a beacon of trust and integrity in an increasingly complex world. India stands at the crossroads of becoming a global leader in scientific

research, but the pressures of publication and the rise of predatory journals pose serious challenges to this ambition. By addressing these issues from both ethical and regulatory perspectives, India can ensure that its research community is one that values integrity, transparency, and credibility. Only by safeguarding the integrity of research, can India maintain its place in the global scientific arena and continue to contribute meaningfully to the advancement of knowledge.

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