Predatory Journals: Alerting Nurses to Potentially Unreliable Content

Exploitative publications are degrading scholarly publishing.

Nurses frequently turn to the journal literature to inform best practice and stay updated on the latest research within their areas of specialization. While the open access (OA) movement has been beneficial in removing some barriers to retrieving and reusing scholarly journal literature, questionable publishing practices have also emerged to exploit a shifting and more expansive online environment.

Predatory publishers, some of which have launched multiple journals that superficially resemble reputable journals in title or content, exist primarily for financial gain rather than the dissemination of evidence-based research and practice. These journals are degrading the integrity of scholarly communication by promising rapid publication, for a price, but little quality control such as peer review or editing.

The greatest threat lies in medicine and the health sciences, where unreliable information puts patient care at risk. This article seeks to heighten practicing nurses’ knowledge of predatory journals and their harmful practices and to provide all nurses, including nurse researchers and authors, with strategies for identifying and avoiding content published in such questionable journals.

BACKGROUND ON OPEN ACCESS PUBLISHING

Until fairly recently, access to scholarly journals was largely restricted to college and university libraries and individual readers paying annual subscription or membership fees. In the early 2000s, social momentum grew to eliminate barriers to scientific research findings. International government bodies as well as public and private institutions of higher education established open access (OA) policies as a solution to facilitate the spread of publicly funded research. For instance, the National Institutes of Health (NIH) enacted a public access policy, which mandated in 2008 that research supported by NIH grants published in peer-reviewed articles must be deposited in PubMed Central (PMC), a free full-text digital archive, with the goal of advancing science to improve human health.

Various academic institutions have also created online open repositories searchable by Google and other search engines in order to provide global access to research output. OA provides unfettered access to online journal content, regardless of institutional affiliation or membership, as differentiated from online journal full-text access, which simply reflects a technology change from traditional print to digital format and typically requires a society membership or a subscription (individual or, increasingly, institutional) or direct payment for article access.

Since OA journals are not financially supported by subscription costs, the publishers operate using a business model in which authors generally pay fees, called article processing charges, to cover value-added publishing services including peer review, copyediting, and marketing. Regrettably, under this pay-to-publish model, OA has come to be exploited by fraudulent journal start-up ventures primarily driven by financial gain rather than the distribution of sound scientific research, and in some cases supported by unscrupulous authors eager to expand their curricula vitae. Jeffrey Beall, a tenured librarian at the University of Colorado Denver and widely recognized authority on this deceptive phenomenon, has notably termed such publishers and journals as having a predatory nature.1

PREDATORY PUBLISHING PRACTICES

Lack of peer review. One of the major concerns with predatory journals is the lack of a legitimate peer review process. Peer review, also known as refereeing, is significant to the quality control of the written body of nursing knowledge as well as that of other scientific and clinical disciplines. With traditional scholarly nursing journals and reputable OA journals, external expert reviewers draw upon their nursing or other educational backgrounds and writing experiences to examine submitted manuscripts for accuracy, comprehensiveness, and relevancy.

The process requires a few weeks to several months, with two to three expert reviewers performing a balanced critique as well as revision suggestions for the editor and author, in order that the manuscript
may be improved if accepted for publication. Peer review is an important quality indicator of scholarly communication. Although peer review does not determine data accuracy, when it is working properly it serves to improve the robustness of an author’s premise, the caliber of the references, and the overall strength of an article.

As predatory journals continue to emerge, nurses have a responsibility to safeguard evidence-based practice from unsound science and protect the safety and health of patients.

On the other hand, because of their negligible or nonexistent peer review process, predatory journals typically offer rapid acceptance and publication following manuscript submission. As such, articles in predatory journals may contain grammatical errors and substantial flaws, the latter of which could possibly misinform practice and pose a threat to patient care and safety.

Absence of editorial leadership and ethics. Since predatory journals exist for monetary purposes rather than dissemination of quality evidence-based information, they may engage in a number of other irresponsible practices. Legitimate journal editors are a key missing component of predatory journals. Besides other duties, editors play an important role in upholding high standards of professional communication. Overlooking the need for an editor’s disciplinary expertise and accountability for the integrity of the journal content reflects a disregard for ethical editorial leadership.

Fabricated metrics resembling journal impact factor or other forms of journal rankings are posted on predatory journal websites, masquerading as a mark of quality, despite the fact that the impact factor derives only from Journal Citation Reports found in the Web of Science database from Clarivate Analytics.

Spurious editorial boards. Individual scholars and others may also be listed as editorial board members without their knowledge or consent, or individuals named for these positions on the publication website are assigned fictitious credentials and academic affiliations.

Exploited authors. Ample literature addresses the need for prospective authors to be wary of submitting their works to predatory journals. The long-term repercussions of publishing in such venues may damage their reputations and limit dissemination of their work. Lack of transparency about significant author fees and unstable archiving of articles are just a couple of the serious issues encumbering nurse scholars and other researchers trapped by the lure of predatory publishers, who solicit work aggressively and often indiscriminately.2

Dangers to nursing practice. Most alarming are the possible consequences of flawed research creeping into clinical practice. Unprofessional publishing practices particularly threaten evidence-based health care because “the pseudoscience and poor scholarship published by predatory journals could conceivably result in harm to patients and the health information seeking public.”3

PREVALENCE OF PREDATORY PUBLISHING
Beall, credited with calling attention to these misleading practices, began maintaining a list of predatory publishers and journals in 2011 on his Scholarly Open Access blog. The list gained a notable following, starting with 18 entries and increasing rapidly to over 1,000 by January 2017. Authors and others in academia turned to Beall’s lists as a one-stop source to check on suspicious publishers and titles; without warning, the lists were removed and Beall’s website shut down in mid-January 2017, creating a minor shock wave in the scholarly community over their loss. Numerous predatory publishers and journals have undoubtedly materialized (or, in some cases, quietly disappeared) in the past year. While various cached versions of the list are available online, in the absence of active updating based on clear criteria, these lists can’t be relied on as accurate.

Predatory nursing journals. In 2016, Oermann and colleagues from Duke University School of Nursing published the first study of predatory journals specifically occurring within the field of nursing.4 Overall, 140 offending journals from 75 predatory publishers appearing since 2011 were documented, a clear indication that nursing is not invulnerable. Unsurprisingly, the number of predatory nursing journals has rapidly increased in recent years. The research team found that the number of articles published in most predatory
nursing journals noticeably dwindled after the first volume and that most titles ceased publishing altogether after only a year or two.

The authors remarked as well on the wide range of specialty areas covered within single journal issues and on the inclusion of content from nonnursing fields such as dentistry. In the study, editors were listed for less than half of the journals—and among the editors who were listed, only a fraction were actually nurses. In addition, some of the peer reviewers who responded to the survey portion of the study were completely unaware their names had been listed on the journal websites, as they had not, in fact, acted as peer reviewers. Observed the authors, “When people with these titles are not involved in the journals’ editorial practices, the entire quality of the peer review process comes into question.”

Medical librarians may help in many ways, and nurses should not hesitate to seek their assistance.

IDENTIFYING CONTENT FROM PREDATORY PUBLISHERS
When searching online for nursing-related information, it may be tempting to dismiss articles from all OA journals in order to avoid content from the subset of OA journals that are from predatory publishers. However, many OA publishers maintain high standards, and according to the most recent STM Report on the state of scholarly and scientific publishing, the OA segment represents as much as one-fourth of all journals. The strategies below should assist practicing nurses with deciphering questionable journals.

Directories of screened journals. On a macro level, consulting a directory of screened journals is a rapid and reliable way to assess an unfamiliar journal or publisher. In 2014, the International Academy of Nursing Editors (INANE) initiated a campaign, with numerous editorials appearing in nursing journals, to alert the nursing community to predatory publishing practices. INANE, along with the publication Nurse Author and Editor, maintains a directory of reputable nursing journals at http://nursingeditors.com/journals-directory. As well, the Directory of Open Access Journals (https://doaj.org) is an extensive listing of over 9,000 peer-reviewed OA academic journals, covering science, technology, medicine, social science, and the humanities, which meet quality assurance guidelines. The directory is a nonprofit undertaking that “aims to be comprehensive and cover all open access scientific and scholarly journals that use a quality control system to guarantee the content.”

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Scholarly databases are another resource for validating questionable OA journals, since they typically employ selective inclusion criteria for quality control. CINAHL, Medline, Scopus, and Web of Science are suggested databases to use for searching within pre-approved health care–related journals. While these databases require institutional access, which may be limited to particular libraries, each provides lists of freely viewable indexed journal titles.

A caution about PubMed. Nurses may have a greater opportunity to search in PubMed (www.pubmed.gov) from the National Library of Medicine.
(NLM) because it is freely available. Contained within PubMed is the OA repository PMC. Authors who have received federal grant funding from the NIH must submit their final manuscripts to PMC, according to the NIH’s public access policy. For authors who have published in predatory journals, PMC acts as a back way into PubMed because of the NIH mandate to make taxpayer-supported research more accessible. While some PMC journals are indexed by Medline—which has very high inclusion standards and is a core component of PubMed—a number of these journals are not. This is a noteworthy distinction; PMC does not utilize the same rigorous selection criteria as Medline, and articles from questionable OA journals have been discovered in PubMed owing to their inclusion in PMC.7,8

PMC citations are identified with a PMCID number and should be carefully scrutinized. Since coverage within PubMed is not a fully reliable indicator of quality, it is wise to check whether the journal of an article found in PMC is also indexed in Medline. You can do this by entering the journal name in the NCBI [National Center for Biotechnology Information] Databases/NLM Catalog link (www.ncbi.nlm.nih.gov/nlmcatalog/journals) for added assurance.

Google Scholar, while user-friendly and readily accessible, has no selection committee or quality filters. Nurses are thus advised to closely scrutinize the journal websites, as described in the following section on microevaluation strategies.

**Quick tips for assessing journal websites.** Nurses frequently discover articles through general web searching and land at journal websites to retrieve the full text. To assess an individual journal website for possible predatory status, watch for the warning signs in *Microevaluation: Quick List of Predatory Publisher Warning Signs*.3,9,10

**No single indicator of predatory status.** Online information seekers are recommended to look for a composite effect of warning signs rather than rely on one or another indicator to judge whether a journal’s integrity might be questionable. As Beaubien and Eckard write, “[N]o single criterion or list can indicate sufficiently whether a particular journal is reputable or not; rather, it is the cumulative effect of both positive and negative quality indicators that should inform a researcher’s final decision.”9 Encountering multiple red flags is a warning to steer away from a particular journal. Guidelines that focus on responsible and transparent publishing practices, reflecting the opposite characteristics of the above warning signs, also exist.

**Or ask a librarian.** Even with the above strategies, the process of vetting an unknown journal or publisher may not always be clear. If uncertainty remains, nurses are encouraged to check with a hospital or academic librarian. Librarians in these settings are familiar with health care publishers in addition to being expert searchers who can further investigate journal/publisher legitimacy. Librarians are also able to support other research needs, including assisting with literature searching, setting up alerts for continuing database updates, and providing access to full text articles. Medical librarians may help in many ways, and nurses should not hesitate to seek their assistance.

It has long been recognized that research studies should be critically analyzed for possible bias and flaws as part of evidence-based practice. In a rapidly changing online publishing landscape, it is also imperative to be cognizant of predatory publishing practices. Nurses are advised to apply the strategies mentioned here. As predatory journals continue to emerge, nurses have a responsibility to know how to assess the quality of information sources to safeguard evidence-based practice from unsound science and protect the safety and health of patients.▼

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**REFERENCES**