Predatory publications in evidence syntheses

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Background
Predatory publishers are research journal publishers who use unethical business practices, minimal or no peer review or limited editorial oversight to publish journals that are below a minimally accepted standard of quality (1). However, there is no clear criteria of what makes a journal predatory. They are often, but not exclusively, linked to open access publishing models. These journals are increasing rapidly and have potential to alter results of research syntheses (2). If their open access model makes them more accessible to researchers, and their low standards of publication means flawed or fraudulent research is being published, this could mean that future research could be compromised by previous errors.

Results
Of the 459 journals listed by the predatory publisher in health and biomedical sciences, 145 appeared to have never published a paper. A further 64 journals had published papers, but they had never been cited. This left a total of 6802 articles in 250 journals that had received at least one citation. A total of 120 articles had been cited by at least one systematic review (a paper could be cited in more than one systematic review and a systematic review could cite more than one predatory publication), and these appeared in 62 unique titles. 157 systematic reviews cited a paper from one of our predatory journals. Only 1 of the predatory journals cited were indexed in MedLine, 7 in Embase and 2 in CINAHL, however 39 of these titles had select publications in PubMed Central (PMC) as part of public access policies which require authors of NIH funded research to deposit completed manuscripts in PMC. This is similar to other researchers who found in some instances predatory journals were being included in legitimate bibliographic databases (4)

Methods
As there is no strict criteria for predatory journals, we selected a list of health and biomedical science journals from a known predatory publisher. The criteria was both their inclusion on the now-defunct Beall’s list, as well as legal action taken against them by a United States federal government agency (3). From their list of published journals, which numbered over 1000, we created a list of 459 journals with health and biomedical science titles. Using information from Google Scholar we downloaded citations for articles published in these journals to citation management software and used Google Scholar’s forward reference searching feature to determine if the articles are being cited in systematic reviews. Only articles that used the words “systematic review” or meta-analysis in the title or clearly indicated in the abstract that a systematic process was used to write the review were included. Searches were conducted in June-August 2017.

Health and Biomedical Titles
- Never cited
- Had received >1 citation in a systematic review or meta-analysis
- Had been cited >1 time (not in a systematic review or meta-analysis)
- Never published a paper

Where Titles are Indexed
- Not in any Bibliographic Database Studied
- In PubMed if author supplies only
- Embase and PMC
- CINAHL only
- Embase, CINAHL and PMC

Conclusion
Systematic review authors need to be vigilant for predatory journals which can appear to be legitimate. The publishers of bibliographic databases need to be aware of changing ownership of journals, as most of the predatory journals indexed in MedLine, Embase and CINAHL were formerly legitimate journals that had been sold to a predatory publisher. Using a checklist to ensure that only papers of a high enough quality are included will reduce the risk of including predatory publications, as will awareness on the part of researchers that Google Scholar and PubMed do not provide the same level of quality control as other bibliographic databases. Future research will evaluate the quality of both the index papers and the systematic reviews papers using validated tools.

References

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