

Editorial

The Role of Authors of Systematic Reviews in Exposing Research Misconduct

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Not so long ago Sir Iain Chalmers urged systematic reviewers to use their unique opportunity to detect plagiarism, as well as detecting publication misconduct such as plagiarism and duplicate publication¹. Analysis of primary studies can detect research misconduct: specifically, data fabrication and data manipulation (including beautification, misrepresentation, and selective reporting of outcomes). Research misconduct is widespread and seriously distorts the scientific research record by introducing false reports and selective publications²⁻⁵. All forms of research misconduct make it impossible to estimate the efficacy of therapeutic interventions accurately and other important outcomes from research.

Recently we conducted a workshop at the Cochrane Collaboration's annual colloquium to consider whether systematic review authors do enough to detect and report publication misconduct and data fabrication, and manipulation – important tasks they may do better than anyone else. The workshop was reported in an editorial for the Cochrane Library, on which this article is based (with permission)⁶. As the starting point, we analyzed the Cochrane Library – the biggest collection of systematic reviews - to review current practice. As of July 2010, only five Cochrane reviews mentioned data fabrication and two reported data falsification. In all instances, the misconduct had already been discovered by other authors and editors, mostly in journals. Only one review clearly stated that a primary study was excluded because of plagiarism. In contrast, duplicate publication – which is considered a form of publication misconduct by the international Committee on Publication Ethics (COPE www.publicationethics.org), albeit a relatively minor form - is reported in 440 of 4372 reviews in issue 9 of 2010 *CDSR*. This may reflect the fact that duplicate publication is described in the Cochrane Handbook, while other forms of scientific and publication misconduct are not discussed or only mentioned in passing. Scientific fraud is mentioned very briefly, as a possible source of bias and without further comment.

Unfortunately, the tools provided now for preparing Cochrane reviews do not help review authors to manage discovered cases of research misconduct. Risk of bias is now addressed extensively in current Cochrane reviews, and GradePro now allows fuller reporting of flaws in primary studies: but both tools encourage reporting of poor methodology rather than poor integrity. Of course, experienced systematic reviewers become skeptical about studies from

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certain authors, sites and even countries known for having poor research integrity records and are particularly cautious when appraising trials where too many participants have been recruited from a single site.

It is not clear what the authors of a review should do with all their knowledge about the probably biased research record. Current practices of the Cochrane Collaboration allow them to exclude studies without clearly identifying misconduct. There is no guidance on how to report misconduct within the reviews or on how and when to contact editors of primary journals, and review authors have no resources to investigate or refer cases. In this situation, simple exclusion of any dubious study may often be the natural reaction of the review author.

The CDSR is now a journal, but it provides no guidance for its authors and editors on the ethics of research and publication. But at least some entities of the Cochrane Collaboration are members of COPE, which provides editors with specific advice on both unresolved and proven cases of misconduct and, when necessary, on referring cases to authors' institutions and licensing bodies.

However, authors of systematic reviews are in a different position from editors judging the original reports on which reviews are based. Review authors have even more limited resources than journal editors do, yet they have deeper knowledge of the subject of the review and have personal responsibility for summarizing the research data. Could publication of a systematic review with comments about misconduct equate to a journal's notice of concern and might this lead to retraction of one or more primary studies if necessary?

We believe it is time for the Cochrane Collaboration to update its Handbook and Policy Manual by adding guidance on detecting and reporting misconduct in primary studies within Cochrane reviews. First, the Handbook must clearly acknowledge the possibility of finding misconduct in primary studies. Secondly, it should advise on how and when to describe and report misconduct (for example, selective reporting is highly prevalent in primary studies but will not always amount to serious misconduct or warrant exclusion of a study from a review, and duplicate publication may sometimes be warranted). Options might include prominent flagging of reviews that report misconduct; using special tables to list studies where there was misconduct; and providing a short glossary of terms for research misconduct that differentiates appropriate practices such as data transformation procedures from inappropriate data manipulation. Using the right terms would ensure consistent reporting within Cochrane reviews and would enable reliable searches of completed reviews. The appearance of such guidance could influence the whole field of systematic reviewing – a vital and fast developing part of the world's medical research endeavors.

Recommended practice for systematic reviews might also provide flowcharts similar to COPE's on reporting, handling, and referring cases of misconduct (www.publicationethics.org/flowcharts), recommended actions include:

Writing to the authors of suspect primary studies to seek explanations for apparent misconduct: asking "Have I misunderstood?" This would fit well with the already common practices of asking authors of primary studies for further information and explanations and for access to raw data.

Contacting authors' peers in confidence to sound them out but without making specific accusations would be advised and finally contacting the journal(s) that published the study if the authors of a primary study do not reply or do not respond adequately.

Flagging up to Cochrane Review Group editors any cases of misconduct found in Cochrane reviews and informing the editor in chief of the Cochrane Library was debated. Other options debated at the Cochrane workshop included appointing a Cochrane Collaboration committee of fraud busters. Internal referrals to such a body would relieve Cochrane reviewers of the associated ethical, professional, legal, and practical burdens and would guard against making malicious accusations. Referral of anonymous cases to an external body (e.g. COPE) was also discussed and a more radical proposal to build a "name and shame" website for collating proven cases of misconduct was contemplated.

Care must be taken to develop ethically and legally sound guidance for systematic reviewers on these topics, and to avoid tarnishing researchers' reputations without cause or due process. We believe that systematic reviewers should report newly discovered and previously known cases of misconduct in primary studies, should avoid using euphemisms to downplay misconduct, and should have proper support and guidance from journal editors (editors whose journals have published unsound primary studies, as well as editors publishing the systematic reviews). Together with editors, systematic reviewers can work towards reporting clean, unbiased systematic reviews and increase the reliability of the research record.

Competing interests: The authors have completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf (available upon request) and declare (1) no receipt of payment or support in kind for any aspect of the article; (2) no financial relationships with any entities that have an interest related to the submitted work; (3) that the author/spouse/partner/children have no financial relationships with entities that have an interest in the content of the article; and (4) that TG served on the council of the Committee for Publication Ethics from 2008-2010 (an unpaid task), but there are no other relationships or activities that could be perceived as having influenced, or giving the appearance of potentially influencing, what was written in the submitted work.

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