

review went undetected by the editorial or peer-review process of the *British Journal of Psychiatry*.

- 1 Coleman PK. Abortion and mental health: quantitative synthesis and analysis of research published 1995–2009. *Br J Psychiatry* 2011; **199**: 180–6.
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- 6 Charles VE, Polis CB, Sridhara SK, Blum RW. Abortion and long-term mental health outcomes: a systematic review of the evidence. *Contraception* 2008; **78**: 436–50.
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Professor Coleman's systematic review and meta-analysis of the literature on termination of pregnancy and mental health¹ featured several significant omissions: an undisclosed conflict of interest; no assessment of publication bias; and no assessment of the quality of studies included. The search strategy was also inadequately reported, and the meta-analytic technique was faulty.

First, the paper states 'Declaration of interest: None'. We believe this is incorrect. It seems that Professor Coleman is an anti-abortion campaigner, who has previously expressed the view that campaigning should include work in academic journals. For example, in a Powerpoint presentation on the website of the American Association of Pro-Life Obstetricians and Gynecologists, Professor Coleman states:

'We need to develop organized research communities to continue the research, apply for grants, recruit young academics, critique data produced by pro-choice researchers, challenge politically biased professional organizations, train experts to testify, and disseminate cohesive summaries of evidence.'²

The *British Journal of Psychiatry* has committed to the International Committee of Medical Journal Editors' uniform requirements for declaration of conflict of interest. This requires the declaration of 'any relevant non-financial associations or interests (personal, professional, political, institutional, religious, or other) that a reasonable reader would want to know about in relation to the submitted work'.³ As noted in a recent editorial, 'the difficult words here are "personal", "relevant" and "reasonable"'.⁴ Given the role that campaigning has played in this issue, we believe this conflict of interest should have been declared to readers.

Second, unusually for a systematic review and meta-analysis, there was no attempt to account for the role of publication bias in the findings. We have replicated the meta-analysis by importing Coleman's data into Stata 11. After verifying that the summary odds ratios and confidence intervals produced were identical, we went on to create a funnel plot (Fig. 1) using metafunnel. This

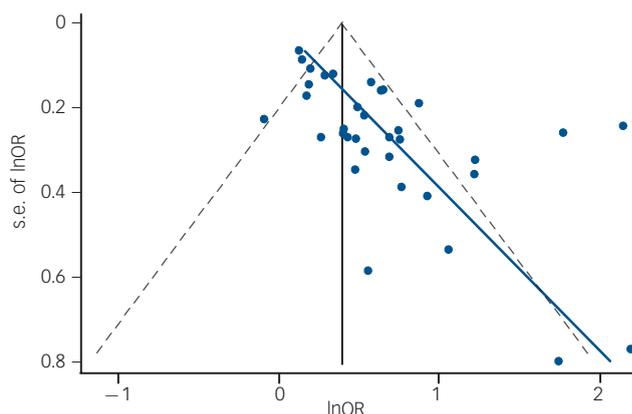


Fig. 1 Funnel plot examining publication bias data presented by Coleman.¹

found evidence strongly suggestive of publication bias in the literature presented. We further used Egger's test using the metabias command in Stata 11, and again found very strong evidence suggesting publication bias ($P < 0.0001$).

Third, we are concerned to note that there was no attempt to account for quality of evidence, since a previous systematic review and meta-analysis found strong evidence for a relationship between methodological rigour and study results:

'The highest quality studies had findings that were mostly neutral, suggesting few, if any, differences between women who had abortions and their respective comparison groups in terms of mental health sequelae. Conversely, studies with the most flawed methodology found negative mental health sequelae of abortion.'⁵

Finally, we note that there was only one assessor for the studies, and several of the included studies had more than one outcome, which were used in the meta-analysis as if they were independent observations.

We believe that as a result of these features the paper falls far short of best practice in the execution of publication-standard meta-analyses.

Declaration of interest

B.G. writes newspaper articles and books on problems in science, and has written three times previously about flaws in evidence used to campaign for changes in UK legislation to reduce access to termination of pregnancy, once online and twice in print, out of approximately 2000 pieces published. Neither author is religious, neither has a history of engaging on the issue of termination of pregnancy beyond that mentioned here.

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