Reviewer's report

Title: Interventions Aimed at Increasing Research Use in Nursing: A Systematic Review

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Reviewer: Nicky Cullum

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General

This is potentially an excellent paper; tackling an important question using an appropriate technique. The paper is also extremely well written and should be published. However I have some concerns about the adequacy of the search strategy and inclusion criteria (see below). It may be that the authors can easily address these concerns and show that my fears are unfounded, (in which case these are fairly minor revisions but the clarification would be important to include). If my concerns are well founded (i.e., important and relevant literature has been missed) then more major revision will be required.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Previous systematic reviews of interventions to promote research use are referred to rather briefly and superficially in the first paragraph of the Introduction. The reviews are rather dismissed on the grounds that they focused on physicians but several of these reviews (which were broad in focus, frequently including studies in any health professional group) included studies which were solely aimed at nurses. The fact that these studies were not picked up for this review (despite often being RCTs) rings my alarm bells - I cannot readily see why these studies would not be eligible here. Having said this I have not been back and read the particular papers but I would like the authors of this paper to carefully consider whether there is a problem with their search strategy and whether this explains why these previously reviewed studies of nurses are not included. Alternatively the authors may be able to explain why these studies are not eligible and reassure that their search strategy was adequate.

My concerns centre around the following:

Cochrane Review of Continuing Education Meetings and Workshops (O'Brien et al). Four studies were included in this review that focused on nurses - 3 of the four were RCTs (those by Jones, Mazzuca, and Parker) and a fourth study by Messener was also included. It's not clear to me why these would not feature here.

There is a Cochrane review of Guidelines in Professions Allied to Medicine (Thomas et al) most of these studies were focused on nurses. Clearly there is something of a philosophical disagreement here which may wholly or in part explain these apparently anomalous inclusion decisions and this deserves more attention in the Discussion. Some of these previous authors (Hodnett, Davies) conducted studies which (judging from the titles of their papers) they viewed as measuring research use, whilst the studies in question were explicitly excluded from this review because (page 10) there was "uncertainty that the outcomes were measuring research use...interventions not explicitly aimed at increasing research use or evidence based practice". This is confusing to the reader who cannot understand your decisions without reading the original papers - which shouldn't be necessary to interpretation of the review. It seems odd to have included studies where the outcome measure was self rated research utilization competency and appear to have excluded studies which measured nurse behaviour in the relevant clinical area - i.e, the application of a piece of research or instrumental research use. I need to understand how self rated research utilization competency is a valid surrogate for research utilization! No justification is given.

Where the research findings are presented and discussed (page 11 onwards) I needed more detail.
regarding the interventions to aid interpretation. It is unimaginable that a systematic review of a pharmaceutical would not make the dosage regimen in the studies absolutely clear and similarly we need to see a bit more description of the educational intervention evaluated where the results are presented (there is a little detail but not enough in my opinion - previous authors have found interactive teaching styles to be important but style does not get much consideration here). Importantly conclusions about the ineffectiveness of educational interventions are not accompanied by considerations of statistical power - are we dealing with reasonable evidence of no effect or an absence of evidence here? The distinction is crucial and made more clearly on page 13 than it is on page 11).

In summary I think readers need a much more detailed consideration of why you have excluded studies of interventions to promote research use in nursing that have been included in previous Cochrane reviews; reviews that (on the face of it) are addressing aspects of the same question as yours.

Discretionary Revisions (which the author can choose to ignore)

I think the paper would be strengthened by giving some sense of the conclusions of previous reviews in the Introduction [refs 6-8].

I think the authors should consider the potential impact of having only included English language studies in the "Limitations" section.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.