Author’s response to reviews

Title: A review of characteristics and outcomes of Australia's undergraduate medical education rural immersion programs

Authors:

Belinda O'Sullivan (belinda.osullivan@monash.edu)
Matthew McGrail (Matthew.mcgrail@monash.edu)
Deborah Russell (deborah.russell@monash.edu)
Helen Chambers (Helen.Chambers@monash.edu)
Laura Major (Laura.major@monash.edu)

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Author’s response to reviews:

Reviewer #1:

1.1 Thank you for the opportunity to review this interesting and largely well written manuscript. The aim of the review is timely, given the policy focus on rural immersion for medical students.

RESPONSE: We thank the reviewer for these comments

1.2

I think the manuscript could be further strengthened by attention to the following: The structure from page 7 could be improved considerably. On page 7, there is a major heading titled results, but then on page 8 there is a heading, study selection, that describes how the articles were chosen and how many were included. This seems an odd ordering of the content. Detail on study selection should be included at the end of the methods section and I believe a PRISMA diagram should be included so the process can be clearly followed. A clear description of included studies should be provided at the end of the methods section or at the start of the results.
RESPONSE:

We agree with the reviewer on these suggestions.

Action 1:
We have moved the section ‘study selection’ to sit at the end of the methods and precede results.

Action 2:
A PRISMA diagram was added to the end of the methods section as Figure 1, with now redundant text under ‘study selection’ removed.

1.3. I was disappointed not to see the usual table of included studies in tabulated format with information given about the studies. I was a little intrigued that you made a statement about small sample sizes etc. but did not present data in tabulated format. The manuscript would be significantly strengthened if a table was added that showed author, location, major findings and some comment on quality for each of the included studies. I think some sort of a table of all included studies is standard in this type of review. I fully understand that Arksey and O’Malley argue that the purpose is to scope the literature, however, critics of their method highlight the lack of even simple quality assessment. I think this should be included as it has been highlighted in the abstract and body of the paper and has become far more usual in scoping reviews. This does not have to be detailed.

RESPONSE:

We agree with the reviewer’s note that some scoping reviews can be limited by a lack of any quality assessment.
Action 3:
We added a Supplementary Digital Appendix 1 – a description of papers included in the review by author, year, location, population, objectives and methods, outcomes and strengths and limitations.

This adds to the concise summary of the existing evidence in Tables 2 and 3.

We also added more information to Tables 2 and 3, not only about sample size, post-graduate stage evaluated, whether the study had a control group or not, but also about and how study factors (like interest) were measured, relevant confounders that were accounted for and statistical testing/ significance.

We added more text about quality issues of the studies referred to in the results. This supports readers to access information about the results as well as the quality of the studies and find out more detail if they would like to.

Together this provide a one-stop synthesis of the Australian immersion evidence (both outcomes and quality) to date.

Action 4:
We edited any loose terms like ‘small sample sizes” throughout the body of the paper to provide more exact information.

Action 5:
We added a paragraph about quality in the results section to summarise notable factors for the quality of research.
Action 6:
In the ‘conclusion’ a statement is now incorporated as to the focus of further research, and we strengthened the existing statements about quality of evidence and how this could be specifically improved.

1.4 There are some clumsy sentences throughout and I would encourage a strong proof read to improve the readability of all sections.

RESPONSE:

Action 7
Thank you for suggesting this. We have responded by undertaking very thorough editing to ensure use of short sentences and improved general readability. This is notable in tools track changes.

1.5 Overall, though I think it is really interesting but would be so much stronger if there were a summary table of all included studies.

RESPONSE:
We have addressed this in 1.3

Reviewer # 2

2.1 Well written scoping review of Australian based rural immersion programs and effect on rural practice outcomes. Introduction provides a satisfactory rationale and need for the scoping review. Methods section outlines the approach for the scoping review.

RESPONSE: We note these positive comments
2.2 It may be helpful to describe the intent of scoping review for the readers. How do scoping reviews differ from systematic reviews as an example?

RESPONSE:

Action 8

We have written a sentence in the Methods (paragraph 2), to clarify this for the reader.

2.3 I would also recommend a definition of "rural" and "metropolitan" for international audiences. It was unclear what the defining parameters of rural vs metropolitan were? These terms are used throughout the paper, however it is unclear what the definition of these terms are.

RESPONSE:

Action 9

We thank the reviewer for this important suggestion. We have now corrected with the addition of 2 sentences in the first Methods paragraph, ensuring this material and what is meant by “rural” is easy to interpret for the international reader.

2.4 Results provide a concise summary of the existing evidence and this section does add to the evidence in this area by synthesizing the evidence within an Australian context. I would recommend further discussion of the potential confounding variables that could be influencing the outcomes observed in the studies. As an example, are there any existing bursary programs or incentives for graduates across the various states that may have influenced rural practice outcomes in addition to the rural immersion experiences?
RESPONSE:

See actions 4 and 5 as detailed under 1.3 above, we have now addressed concerns of missing ‘quality’ detail relating to confounding variables, by adding a Supplementary Digital Appendix 1.

We have additionally added detail about size of study, statistical testing and adjustment for confounders in the Results and Discussion sections to more clearly demonstrate the strength of reviewed evidence.

Action 10

We now specifically comment on different incentives and bursaries in various states and territories that could influence rural practice outcomes.

2.5 If there were key recommendations to help advance research in this area, as the authors have identified weaknesses in existing research designs, what would be those key recommendations for future research in this field?

RESPONSE: We have clarified this in the discussion and conclusion (and noted this in the abstract as well), so that we now emphasise the parameters for stronger quality research to better set the directions, based on our findings. Also see 1.3 Action 6.