Reviewer's report

Title: Aboriginal perspectives on active living in remote Australia: a qualitative exploration of the socio-cultural link between health, the environment and economics

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Reviewer: Justin Richards

Reviewer's report:

Well done to the authors on tackling a difficult topic and presenting the research results in a way that may provide an indication of how Indigenous public policy related to physical activity could move forward in Australia. I think the findings in this paper are a significant addition to the current evidence base and it is important that they are widely disseminated publicly and in the academic literature. However, I do have some major reservations about the current structure and content of the paper. I strongly encourage the authors to address these concerns so that these important research findings can be published.

Major Compulsory Revisions

- The "Background" section contains important information that directs the reader towards the research objectives. However, it is verbose and I think it could benefit from a more streamlined approach that focuses on the problem addressed in the target population and a more organised structure that clearly outlines:
  1) The problem (i.e. what we know about remote Indigenous health and PA);
  2) What we don't know (i.e. cultural specificity of Indigenous health interventions);
  3) What this study adds (i.e. study objective, hypothesis).

- The "Methods" section does not provide sufficient information to replicate the study and is poorly organised. I would encourage the authors to review other similar papers in the target journal and consider them as structural and content templates. The methods would certainly benefit from including the following (or similar) subtitles to improve its structure:
  1) Study design
  2) Participants (include details of how communities and individuals were selected)
  3) Data Collection Procedures
  4) Data analysis
  5) Ethical approval

- The first section of the "Findings" section should actually be included as part of the study Methods. It is also important to define the age groups that you
considered (i.e. explain what is meant by "26-46+" - is this two age groups combined?).

- The "Setting the scene: some observations" section provides some important background information on the Indigenous context and health behaviours. I don't feel that much of this information constitutes the novel contribution that the authors are making to the evidence and therefore it should be better referenced and not included in the study "Findings". I recommend that the authors consider how this information may be useful to contextualise the study in the "Background" and/or explain the findings in the "Discussion". Alternatively, if some of this information was directly relevant and observed in the target communities of this study, it could integrated into the thematic "Findings" that are subsequently presented in this section.

- In the "Discussion" section the authors have done a good job at presenting their findings in the context of existing literature. However, they have failed to adequately discuss the limitations of their study and how this may have influenced their findings (e.g. sample bias - females already active, representativeness and size of sample, generalisability to other communities, selective reporting of results from only a few participants etc...). They have also failed to identify areas of need for future research

Minor Essential Revisions

- In the "Background" section, further explanation is needed for the statement "... remote Aboriginal populations, being physically active is possibly even more important in the prevention of chronic disease in this population than it is amongst other". Please develop why might this be a particular problem for remote populations?

- The "Work and 'walkabout'..." section is well written and presented. However there is one point where the authors use the phrase "Consistent with the literature...", but fail to provide references for the statement.

- At the end of the "Discussion" section the authors refer to a "rich contribution made by the paintings of physical activity". However, the paintings are not specifically referred to in the "Findings" or the " Discussion" prior to this statement. It would be helpful if the authors described this "rich contribution" earlier in the manuscript so that the reader understands how this contributed to the conclusions drawn.

- In the "Conclusion" the authors make the statement that "public health advocates are turning to Indigenous models...". I don't agree that this is a major conclusion from the study. Based on the study findings, perhaps it would be more appropriate to say that "public health advocates need to recognise Indigenous models..."

- Please check that the reference formatting is consistent throughout the document and is compliant with the journal regulations.
- Please ensure that there is consistency in the use of the terms Indigenous and Aboriginal throughout the document. At times it appears that these are used interchangeably, but it may be better to be consistent with the use of Indigenous throughout. Also check that capitalisation is consistent throughout.

- The authors should consider softening some of the assertions that are made in the paper. Although this paper makes an important contribution to understanding how Indigenous PA interventions could be improved, it is important to recognise that, given its limitations, it is not possible to make strong causal statements based on the outcomes of this work (e.g. end of first sentence of the discussion: "...is an appropriate health promotion strategy to encourage physical activity" could be changed to "...may be an appropriate health promotion strategy to encourage physical activity".

Discretionary Revisions

- There are several very long sentences in the text, which may confuse the reader. I would encourage the authors to shorten these and/or divide them into two sentences to improve ease of reading.

- Although the authors have discussed the findings well in the context of other Indigenous literature, they may want to consider the broader evidence base that is growing around physical activity and "social capital".

- Although this is not the focus of your argument in the background section, it might be pertinent to note that PA recommendations have now shifted to 150 minutes/week rather than 30mins/day.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests