Reviewer’s report

Title: RESEARCH INVOLVEMENT AMONG UNDERGRADUATE HEALTH SCIENCES STUDENTS: A CROSS-SECTIONAL STUDY

Version: 0 Date: 05 May 2017

Reviewer: Bryan Burford

Reviewer's report:

Overall this is a good paper. The need to identify and encourage research interest is a widespread concern, and the paper goes some way towards indicating how it may be addressed. My comments are therefore relatively minor - although both introduction and discussion require some revision of content and structure. Questions relating to each section of the paper are given below.

Background

The introduction is a little brief. While you do raise key points, a bit more detail on the background literature - for example how the link between research involvement as undergraduates and later research activity has been demonstrated, and why this may be. Some more information about your specific context is necessary - although discussed later on, introducing the importance of language in the South African context, and why it is something to capture in the questionnaire, would be helpful early on. This would not just provide some explanation of why the data was captured, and seed your later discussion of it, but also perhaps provide a deeper understanding of how the SA context compares and contrasts to other part of the world.

On a similar point, the inclusion of AHP students is a big strength of the study, and I think you can say more about how different groups are represented in research, and why that may be (ie the extent to which research is a part of clinical job plans, the range of academic locally a local context will allow readers to consider how it compares to their own. (For example, it is currently an important concern in the UK, but I don't know enough about clinical education and careers in SA to see immediately whether the situations are comparable).

Finally, a clear statement of aims or research questions would provide focus for the paper, and scaffold a more focused structure for the discussion.
Methods

I think the method is appropriate and overall well-described, I think some detail is lacking - for example details of response format, the number of items, etc. While table 1 provides some of this information, and a full example of the questionnaire is provided, more description in the text would be helpful. A distinct subsection on questionnaire development would allow this to be clearly signposted.

Some of the contextual detail in the paragraph crossing pp6-7 would be better in a separate subsection. I would suggest restructuring along the lines of: Course Context, Participants, Questionnaire Development, Data Collection, Analysis. (Context could in fact go at the end of the background).

A bit more clarity on the data treatment is also needed. You say items were 'grouped together in analysis', which makes it sound like a post hoc, and potentially arbitrary decision - and which would be better supported by some data reduction (eg factor analysis). However, the questionnaire seems to have been designed with such structures in mind, and so it may be a stronger case to be clear about that in the questionnaire design section.

A small point of clarity - the logistic regression was stepwise (I assume p-to-remove rather than criterion-based), but the linear regressions weren't?

The note on data entry isn't strictly necessary.

Results

The reporting of alpha I think is best placed in the Results, with a short section clarifying how the reliability and the validity of the questionnaire have been demonstrated in development and piloting. This is particularly true of the 'self-perceived research competence' scale.

On the response rate, while your closeness to the course may have been a factor, it is not unusual to get very high response rates when a questionnaire is distributed face-to-face in a lecture setting.

Otherwise results seem fine.
Discussion

The Discussion is wide-ranging and comprehensive, but lacks a bit of focus and doesn't really sell the 'so what?' of the paper. Some subheadings to signpost particular points may be helpful, although that can be personal preference. Some shortening may help key findings and interpretation to be clearly stated.

Some of the content (eg on language) could be moved to the background as it seems to have informed the questionnaire design. That would make the discussion a bit more focused in terms of what the findings mean - although you refer to diversity policies, I'm not sure what the findings re native SA languages mean. Is it simply affirmative action, or is there a cultural shift encouraging people from some backgrounds to pursue research.

Again, there is a similar point with regard to AHPs - what is it about those groups leading to more involvement than medical students - is it curriculum or culture. (It also seems counterintuitive, but there's a chance I suppose that medical students may perceive more opportunities later on in their careers, and feel less urgency to get experience when students).

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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