Author’s response to reviews

Title: The developing and evaluation of an electronic tool to assess the effect of undergraduate training in palliative care: the electronic International Medical Education in Palliative Care (IMEP-e) assessment tool.

Authors:

Amrita Rai (amrai25797@gmail.com)

Stephen Mason (Stephen.Mason@liverpool.ac.uk)

Version: 1 Date: 12 Aug 2019

Author’s response to reviews:

Response Letter

Reviewer 1 – Nicola White

Abstract:

It seems to be quite long - does it fit in the 350 word limit? The introduction & methods section could probably be shortened (as they are quite lengthy) so that you have more space to report the results, which is quite short.

• The abstract after shortening is now 308 words (pages 3 and 4)

• The abstract has been shortened in response to the feedback. The introduction and methods have been shortened and the more information has been added in the results section. (page 3-4)

The subheadings of the abstract include "Demographics" which does not really follow the suggested guidelines from the journal and it seems slightly repetitive of the results section. I would suggest combining these.

• The “Demographics” section has been combined with the results section. (page 3)

I also find it challenging to interpret the results of the subscales. Is the difference a positive difference? In the abstract, I find it more helpful to state something along the lines of "the IMPE-e was effective in improving communication skills (t=-13.52) etc." this will help the reader understand the results - as you have done in the interpretation of the TS score.

• I have changed the results of the subscales (page 3 line 18-22) to be easier to read.
I find the last sentence about the focus groups "Three themes were identified from the qualitative feedback from the focus group, identifying satisfaction with the electronic tool in the main", confusing. It seems as though it isn't a complete sentence? I would suggest to either add the three main themes or, if this isn't an integral part of the findings, remove it.

- I have rephrased this sentence and included the different themes. (lines 20-23 page 3)

I would recommend rewording the final sentence in the conclusion too "This will enable larger assessment studies to evaluate how the WHO call has been addressed". It again, is quite confusing and doesn't read well. I would suggest something like "A larger scale study is needed to determine and evaluate if, and how, preparing clinicians to work in palliative care has been adapted in to routine training" (or something like that).

- I have included the sentence kindly suggested by the peer reviewer. (lines 1-3 page 4)

Background:

Very minor comment - around line 40/41 "parallel with the Thanatophobia scale (TS), to provides a rating on how prepared for palliative" there is a type - the "s" doesn't need to be on "provide". Also - my impression of this is that you get one overall "rating" of how prepared a student is, is this the case? Or do you get two different scores (or 4 with the subscales) that you somehow have to merge together?

- Removed the ‘s’ (line 16 page 6)

- One score is given – I have made this more obvious (line 16-17 page 6)

Aim: I would perhaps expand on the aim slightly to say exactly what it is that you are piloting with the tool. E.g. recruitment, feasibility, content? Is this a pilot study because the tool hasn't been used online before? Can you explain why it needs piloting?

- I have expanded on the reasons for piloting the tool, explaining that the tool has only ever been used in paper format and this is the first time we will be using the electronic format. (lines 22-23 page 6 and lines 1-7 page 7)

Minor comment: I would recommend changing the final secondary outcome sentence on page 7 to: "to identify a hypothesised difference in preparedness between the medical students who were yet to receive palliative care training (3rd year students) and those who had (5th year students)." or something like that as it just makes the comparison a bit more succinct.

- The suggested sentence has been used (line 4-7 page 7)

Methods:
"Design": I would recommend trying to use the same descriptive language for the study throughout. In the aims you call it "pilot", in the design you say "utility and user-friendliness".

- Here I am referring to the design of the pilot study. (line 2 page 8)

"Sample": I don't think the bullet points are necessary (very minor point I realise and happy for this to be ignored!). I think "Convenience sampling was used with undergraduate medical students (Y5 & Y3) at a University in the North West of England". It might also be worthwhile having a short sentence about why these cohorts? Is it because one has received training and the other has not?

- The bullet points have been removed (lines 6-8 page 8)
- The suggested sentence has been added (lines 6-7 page 8)
- I have added information about why these cohorts (lines 8-10 page 8)

"Procedure": It is not necessary to put sample size numbers here. Was the study open for the duration of the year? Was it a one off email or with follow up emails? It would be helpful to add this in. Small typo - space missing on line 46/47 between IMEP-e and were.

- I removed the sample size numbers (line 12 page 8)
- Added “one off email” (line 12 page 8)
- Added a space (line 15 page 8)

"Measures": Can you mirror the score with the anchors - for both the SEPCs and the TS? i.e. "Possible answers ranged from 0 (very anxious) to 100 (very confident) on a visual analogue scale".

- This has been added (line 6-8 page 9)

"Analysis": can you add the date for the ethical approval.

- Date has been added (line 1 page 10)

Results

I find the first paragraph a bit clunky to read. I would suggest changing it to something like: "In total, 125/360 (35%) medical students participated. By year of study, 95/280 (34%) of third year students and 30/80 (37.5%) of fifth year students completed the study. Figure 1 details the recruitment process."

- This sentence suggested has been used to replace the previous (line 2-4 page 11)
Could you clarify the sentence: "There was a smaller sample group within the Y5 cohort due to the wider distribution of the Y5 cohort in clinical placement." Do you mean that Y5 has less students in? Do Y5 students on placement not get their emails? Did you decide prior to data collection that you would not email those on clinical placements? If so, this should be added to the methods section.

- Less fifth year students were contacted because we restricted emails to students at the two core hospitals. I have added this to the methods section (lines 8-10 page 8)

Figure 1. It is also confusing when it says "Cleaned data" in the figure. By this, do you mean that they completed the study? Perhaps "Completed data" would be a better term? This is what you put in the paragraph.

- Changed cleaned data to Completed data (figure 1 page 11)

Table 1 needs more detail. The 'Gender' variable needs to show what the figures represent (i.e. n (%)). The 'Age' variable would typically have a mean/SD or median/IQR alongside a range if needed. Were no other demographic questions asked? I am not sure if the focus group variable is helpful here as it is a subset of the 5th year. Perhaps better to remove it and put the information in the text of the qualitative section.

- I have added the median age (Table 1, page 11)
- I have kept the focus group information here as a reference point for the qualitative section

I would question the aims of the study based on the presentation of the results. The primary aim is reported to be the utility and user-friendliness of the tool but this was not asked of all participants (a reason that is not explained). Why were Y3 not asked about the usability of the online tool? The first results reported are then the secondary aims. I would suggest restructuring this section (or perhaps changing the aims).

- The aim of the study is to pilot the electronic tool with undergraduate medical students at a University Medical School in the North of England, the second aim was to examine if the IMEP-e would be sensitive enough to identify a hypothesised different in preparedness between the medical students. (lines 22-23 page 6, lines 1-7 page 7)
- The aims that are stated in this comment are the aims of the focus group, the focus group was only for 5th year students. (lines 22-23 page 6, lines 1-7 page 7)

I tend to prefer some more description of the statistical analysis in order to be completely explicit in the results, rather than just saying "see table 2". For example, "On the subscale communication, students in year 3 reported significantly less confidence (SEPC = 23.5) than those in year 5 (SEPC = 47.5, t=-13.52,p=.001)". However, I appreciate this takes up more words so I leave this to the discretion of the authors!
Could you explain the "percentage non-overlap" column in the table? I can't see a description in the text and I am not familiar with the concept.

I don't find table 3 of the SPSS output very informative and difficult to interpret on its own. What are the heading variables Q24-30? In relation to the text in the paragraph, how are they expressing positive attitudes? Can you either alter the table so that it is more "reader friendly" or add a better description in the text. What do the numbers in the table mean?

Small typo - page 10 line 43. "difference" should be "differences".

What do you mean by "Individual item analysis was conducted to examine for anomalies within the scale" - what did you do? Were there any? This should be in the analysis section and the results shown in this section.

Page 11 - I would recommend only listing the three headings and then going in to more detail later. The bold fonts and additional text make it quite confusing. Something like: "Three core themes and a number of sub-themes were identified from the focus group discussion. These core/sub themes included: University based teaching, Hospice based teaching, and the Utility of IMEP-e/Online accessibility."

Can you either explain "P1" or use "Participant 1"

Discussion

The primary statement is that the IMEP is easy to use for F1 and beyond. How the results are presented currently, it is difficult to justify this claim.
I have amended this statement. (lines 2-4 page 17)

Page 14 - there is information in the "Utility of the Electronic Questionnaire" that has not been reported in the results. This is part of the "pilot" nature of this work. How was this recorded? Was this all participants? I would suggest that this is put in the results section. How do you know that 35% is a satisfactory response rate? Do you know why the 41 participants who started the study didn't finish? These are the issues I would expect to read about in a pilot study/evaluation paper.

- The utility of the electronic questionnaire is now reported in the qualitative data in the results section. (pages 15-16)

- I have discussed the response rate in greater detail in the strengths and weaknesses section. (page 19-20)

- In the “Utility of IMEP-e” I have now discussed what is stated in the results section under the qualitative data from the focus group (lines 6-12 page 17)

- I have discussed why the 41 participants who started the study didn’t finish. (lines 2-6 page 20)

I think the qualitative and quantitative sections in the discussion can be restructured. There is information here that wasn't reported in the results section. The discussion should be a reflection of the findings in context with other research and other policies, not a repetition on what was done. How do the findings in this study compare with other research? Where do the findings fit in policy? The answers are in these sections, but are hidden between information that should be in the results section.

- I have taken this on board and restricted the discussion so all results are solely in the results section (pages 13-16)

- I have changed the discussion to fit with more with policy (lines 1-11 page 21)

"Strengths and results" - the clue is in the subheading. What are the strengths? Start with why this study is good (because it is!). The female dominated response is interesting, particularly as none of those who were in the focus group (from what I could tell of the table) were female. How do you think this might impact the results? - I see you have addressed this later; I would move this paragraph to this paragraph.

I don't think the one recruitment site is a limitation particularly as this is reported as a pilot study - I think this can be in the 'future research' section.

- I have added some strengths (lines 16-22 page 19)

- I have also changed around the order of the paragraphs to the order suggested.
Paul Taylor (Reviewer 2):

This is a well conducted and presented study, with a good rationale for conduct and the methods used. The use of mixed methods is appropriate. Statistical methods and interpretation appear appropriate to the questions being asked, although I am not a statistician and could not comment as to whether further or alternative methods would have been better.

However, there are some changes I would strongly recommend prior to publication.

There are grammatical issues. In particular, some prepositions/conjunctions have been missed or confused (to, the, of).

"There was a smaller sample group within the Y5 cohort due to the wider distribution of the Y5 cohort in clinical placement." - please clarify this. It isn't clear why this contributes to a smaller sample size.

- I have clarified that in the paragraph (line 8-10 page 8)

The sample sizes aren't consistent - the flow chart states n=80 for the y5 group, but in-text this is 65

- I have removed the sample sizes in the section of “Procedure” as a comment by the first reviewer suggested this was unnecessary. (line 12 page 8)

The description of the qualitative methods, in particular the analysis, is somewhat brief. Was software used to analyse the transcript?

- I have added more information about the analysis. There was no software used as it was qualitative data collected. (lines 14-18 page 9)

The key issue which I think warrants attention is the fact that the qualitative findings have been split between the results and discussion. In particular, the qual findings in the results section are very brief, even allowing for the mixed-methods nature of the study. This disrupts the narrative and makes it hard to follow the findings. A diagram or table might help outline the themes and sub-themes. I would suggest including the qual findings in the results where possible, and reserving the discussion for any aspects of the synthesis of the qual and quant findings.

- The results and discussion of the qualitative findings have been revised to make the findings easier to follow. (pages 11-26)