Reviewer’s report

Title: Global health education in United States anesthesiology residency programs: a survey of resident opportunities and Program Director attitudes.

Version: 0 Date: 27 May 2017

Reviewer: Rutledge Clement

Reviewer's report:

I would like to congratulate the authors on a well-planned and executed study. The statistical analysis is thoughtful and thorough with a very nice bias assessment, and the paper is extremely well written. The study’s only limitation is its modest overall importance. That said, it is important enough to merit publication, and I believe it would be a good fit for BMC Medical Education. I recommend publication with very minor suggested revisions.

Methods:

Regarding the "technique derived by Bethlehem" mentioned on line 14 of page 5, I would like to see a brief explanation of this technique. I suspect this could be a single sentence following the citation of the Bethlehem paper.

A minor stylistic change: the wording beginning at the semicolon on line 17 of page 5 is unclear. It sounds like the authors are presenting results rather than describing methods. Changing to a conditional tense would avoid this: for example, "thus, the absence of a significant difference between early and late responses would suggest…"

Results:

Another minor stylistic change: would try to avoid quantifying results. As a specific example, on line 23 of page 6, I would not say "only." Just present the results (especially because 18% of programs does not strike me as a small number to have a research component).

While not necessary for publication, I would like to see the number of times each destination country was cited by respondents. This information could be nicely presented in a figure using a map and legend, but text or a table would suffice. I think this would be valuable for programs developing or expanding global health electives or residents seeking opportunities on their own.

While also not necessary, I would like to see a more comprehensive presentation of survey results. The paper would be stronger if the results of each question included in the survey were
reported in the manuscript, even if only briefly listed in a table or even appendix. (I didn't check each item in the survey, but I noticed #17 does not seem to be included in the Results section or tables.)

Discussion:

When presenting the estimated maximum bias on line 5 of page 9, I recommend including a short subsequent sentence to explain that this is low and supports your results as being generalizable. I suspect this will not be clear to the average reader. I realize it is stated in the limitations section, but the reader will likely be wondering about this metric after the first paragraph of the Discussion section. So, it would be better not to make them wait until the limitations paragraph.

Regarding the sentence about bidirectional influence on lines 14-16 of page 9, it seems to me there is a much more likely explanation than the existence of global health electives influencing program director attitudes: like most employees, program directors probably self-select to (and are selected by) employment situations that share their values and interests. Thus, program directors open to global health electives probably end up at like-minded programs because it was a cultural fit (rather than ending up somewhere and then changing their beliefs after being exposed to an existing global health elective). This is a minor point, but I think it would portray a better reflection of reality.

On line 2 of page 10, please qualify how large 60,000 or 80,000 DALY's is in relative terms. Is this top 10%? Or top 50%?

Regarding the 2nd paragraph of the Discussion section beginning "Interestingly, the top five…", this paragraph is OK, but I'd recommend rewriting it as I don't think it currently lives up to the high quality of the rest of the paper. I would not expect the geographical destinations chosen by traveling anesthesia residents to directly correlate with DALY's, yet the authors seem surprised at this finding. You don't need to visit the country with the most DALY's to have the best global health experience, you just need some modest threshold above the developed world. Beyond that, travelers and residency programs probably value other characteristics such as safety and well-established medical institutions (with relatively functional O.R.'s) to visit. These characteristics would not be expected in the countries with the highest DALY's. Rethinking this paragraph could make it more meaningful.

I would recommend excluding the term "medical tourism" as a reference to traveling providers. This term typically refers to patients traveling to seek medical care. While it has been used in a derogatory sense about traveling physicians in the past, including in the cited paper, I think using it in this sense is unnecessarily inaccurate. However, this is a stylistic recommendation, so I
would leave it to the preference of the authors; it would not change my recommendation to publish the paper.

Another limitation of the study that should be stated is that psychometric properties of the survey are not known. While it is likely adequate for the purposes of this study, surveys that are not validated, reliable, etc. can generate misleading results.

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

Yes

**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

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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