Author's response to reviews

Title: Feminisation of the medical workforce in low-income settings; findings from surveys in three African capital cities

Authors:

Giuliano Russo (grusso@ihmt.unl.pt)
Luzia Gonçalves (LuziaG@ihmt.unl.pt)
Isabel Craveiro (IsabelC@ihmt.unl.pt)
Gilles Dussault (gillesdussault@ihmt.unl.pt)

Version: 4 Date: 20 July 2015

Author's response to reviews: see over
Reviewer:
William B Weeks
Reviewer’s report:
The paper is much improved. Thanks to the authors for being so responsive. I have two minor ‘compulsory’ revisions. They are compulsory because, without them, I do not believe readers will be able to understand or interpret findings.
1. The authors need to define ‘dual practice’ used in the first sentence of section 2.1. I have no idea what that means. Alternatively, leave that term out and simply describe the purpose of the survey from which the data were collected (i.e., to understand physician practice patterns? To understand the current physician workforce?). For me, ‘dual practice’ has no meaning (or, perhaps, a plethora of them).

‘Physician dual practice” typically defines physicians’ simultaneous engagement in multiple professional activities in the public as well as private sector. This has now been added in the opening paragraph of section 2.1.

2. While I appreciate the authors changed their model to have 5 year increments, it’s not clear either how the model was changed or what the coefficient means. For instance, what does a ‘five-year increases variable’ mean? For the former, just provide an example. Did the authors assign years worked to five-year increments and then use those increments as a variable (what type of variable? dummy, as recommended, or continuous?)

This is correct. We constructed a new continuous variable based on such 5-year increments (see below the reason for not using a dummy). We have now explained this variable in the last paragraph of section 3.

For the latter, provide a narrative example. does it mean that, with an additional five years of training, the hours worked goes down by 0.02? And if so, what does 0.02 mean?

Our results show that for each extra five years of practice as medical doctor, there is a decrease of 2% on the weekly hours worked. We have now provided such a narrative example when commenting on the results on section 4.3, second paragraph.

Given the intercept of 4 when overall work hours of about 50 (I am assuming here that table three refers to weekly hours, but that should be clarified in the table) i cannot imagine that 0.02 means weekly work hours....And the decrease simply makes me more confident that a dummy variable should be used - it is clearly not a linear relationship throughout the lifetime.

As suggested, we experimented with using dummy variables with years practiced, only to find that our previous model with the continuous variable is still superior. First, we created dummies for 5 years categories (as earlier suggested), but due to the small sample size in each category, this strategy did not provide a good model. As an alternative, we also divided the distribution into terciles, resulting in three categories of medical doctors- Junior <= 6 years, Intermediate 6-14 years and Senior: >=14 years. The corresponding model is as follows:
Considering “Junior” as the reference category, between Intermediate and Junior categories was not found significant differences in terms of overall work hours. Between “Senior” and “Junior”, there is a significant difference (p=0.0166), indicating a decrease with seniority of doctors.

Compared to our previous model presented in Table 3, all other variables present similar coefficients, std errors, p-value, and also residuals. In terms of median, our previous model is slightly better. Another reason to prefer the previous model is the use of a continuous variable instead a category variable which, in general, is to be preferred in order not to loose much information.

Our interpretation for the negative relation between hours worked and years of practice that we found in the field is that it is younger doctors end up working longer hours, as they need to establish themselves in several hospitals/clinics, often taking up more than 1 emergency and resuscitation shift a week.

In section 4.3 this needs to be clarified (as do the meanings of all of the coefficients,...what does ‘a decrease of 0.078’ mean in the context of an intercept of about 4? sure, it’s statistically significant, but what does it mean? An alternative to this would be to eliminate table 3, which I find confusing, and simply report on the findings in text form.

‘a decrease of 0.078’ means a decrease of 7.8% in overall weekly worked hours. We have now clarified this in the text. We still believe that Table 3 offers useful information, and would be rather confusing for the reader not to have the results of the regression in the text.
Finally, two minor points:
In table 1, the correct abbreviation is 133rd (just say the term). 133th is incorrect. 
This has been corrected.

In table 3, use <0.001 instead of the long term used for p-value for the constant/intercept.
This has been corrected.